THE PREVALENCE OF SUBSTANCE USE AMONGST FIRST AND FOURTH YEAR COMMERCE STUDENTS AT THE UNIVERSITY OF CAPE TOWN: A COMPARATIVE ANALYSIS

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ABSTRACT

Substance use is on the rise amongst the youth of South Africa. Traditional concern about the youth as the future of South Africa and the portrayals in the media of severe drug and alcohol use among the country's youth have contributed to the need for research into this issue. The aim of this study is to investigate and report the prevalence of substance use amongst first and fourth year commerce students at the University of Cape Town (UCT). The research attempts to create an understanding of student's perceptions of UCT's role in managing substance use. A survey research methodology using questionnaires was employed. The data was analysed using descriptive and inferential statistics. The sample consisted of commerce students. The main results indicated that alcohol is the most prevalent substance of use in this sample followed by tobacco and cannabis. Amphetamine and MDMA usage arose as the next most prevalent illicit substances used by the sample after cannabis. There were no significant differences between male and female alcohol consumption patterns. The majority of students (73%) thought a formal policy on legal substances was necessary at UCT, yet 56% would not support such a policy when it came to UCT events.

CHAPTER 1
LITERATURE REVIEW

INTRODUCTION

This report examines research on the prevalence of substance use amongst students in the Commerce Faculty at the University of Cape Town (UCT). The aim of the research is to examine the prevalence of substance use and its related consequences on a university campus. It also aims to create an understanding of the kinds of substances being used by students. The research also endeavors to gain a general understanding of what students think the university should do to combat the use and abuse of substances on its campuses. The areas that are focused on include; the prevalence of substance use, the type of substances being used, awareness of what UCT is currently doing about substance use and abuse, and what students feel should be done about it. The principal goal of the research is to generate knowledge to input policy and other interventions that would lead to a reduction in substance abuse on UCT campus.

There have been a few studies, conducted at the University of the North, on the prevalence of substance use with South African university students (Parry, 1998; Parry 2000; Peltzer & Phaswana, 1999) that led to the development of this research. This study is in part a replication study of the one of the aforementioned studies conducted at the University of the North specifically the research conducted by Peltzer & Phaswana, (1999). The first part of the survey used in the current research was taken from the latter study, which made use of a survey designed and endorsed by the World Health Organisation.

The Minister of Education has drafted a policy framework for managing substance use and abuse in the learning environment (Department of Education, 2003). In the policy he states that all learning institutions need to have clear policies on both prevention and intervention, strengthened by a restorative supportive orientation (Department of Education). He further requests that these policies and procedures be clearly communicated and disseminated to the school/university/training institution community in a culturally appropriate manner (Department of Education). The author's research will

contribute to policy formulation at UCT. At UCT at the moment there is no formal policy on substance abuse.

A university is both a client-serving and people-processing organisation with its fundamental technology as one of changing human beings (Baldridge, 1984, as cited in, Sithole, n.d.). A university is a complex social structure that not only includes faculty and administrators, but also athletes and students. It is a place where personal problems and issues can generate significant productivity loss on the part of staff and students (Yamatani, Santangelo, Maue & Heath, 1999). Therefore the author purports that not only those who work at a university, but also those who attend a university should receive substance use and abuse treatment and help. The university setting was chosen as there is a lack of empirical research on substance use at South African Universities and this provided an opportunity for research to contribute to the area of substance use amongst young South African adults.

The research aims to differentiate between 1st and 4th year (honours) Commerce students in terms of their substance use patterns. These students were chosen as a lens through which substance use in the commerce faculty could be viewed. The research also aims to improve methods for (a) assessing the prevalence of substance abuse and its associated consequences at universities, and (b) evaluating the effectiveness of current interventions. This research aims to create an awareness of the prevalence of substance use and abuse amongst university students and together with the other studies mentioned above create a need for such research to be conducted at other South African universities across the provinces.

The first chapter of this thesis is a review of the current literature on substance use. The second chapter discusses the research methods employed by the researcher in conducting the research. The third chapter displays the results of the research and the fourth chapter discusses and analyses them. The fifth chapter provides recommendations for future research and practical recommendations for the institution in which the research was conducted. Chapter five concludes the thesis, with a summation of the study.

REVIEW OF THE LITERATURE

Section one of the literature review sets the context for the research and looks at the nature and extent of substance abuse in South Africa. From there, the literature

reviews focus is tapered down to extensively examine research and literature on substance abuse at universities, internationally and nationally. The international perspective focuses on substance use amongst students at universities other than the United States of America and then on substance use at American universities. There is an abundance of research and literature on substance use amongst students at American universities and hence substance use at American universities is reviewed at length. Finally policy and prevention initiatives will be discussed.

In the literature it was found that when researching alcohol or drug use, distinctions between use, abuse and dependence are essential. For a clarification of these terms and information on specific substances of use and abuse, please consult Appendix A.

Nature and Extent of Substance abuse in South Africa

A General Perspective

Whilst alcohol, tobacco and other drugs are used in most countries of the world, the extent, patterns and consequences of use differ from country to country and from time to time (Saxena & Donoghoe, 2000). Many social, economic and political factors have contributed to the global spread of alcohol and other drugs (Saxena & Donoghoe). Alcohol and other drug (AOD) abuse are creating major health and social problems throughout the world (Smart & Sloboda, 2000).

Over the past 10 years South Africa has experienced a political transformation that has captivated world attention (Maiden, 2001). It has become a sought after tourist destination and has attracted much foreign investment. Ironically, it is also emerging as one of the most lucrative countries for drug trafficking, dramatically increasing alcohol and other drug use and abuse (Maiden; Smith, 2005). One of the by-products of the apartheid-induced isolation was a reduced exposure of South African youth to drugs (Maiden). Since the opening of the country's borders to the rest of the world, there has been an inundation of drugs into Africa, and specifically South Africa and Cape Town, has become a halfway house and a dumping ground for illicit traffickers of drugs like "tik", heroin and cocaine (Maiden; Smith).

In the early 1990's evidence-based practice increased with regards to health care in South Africa (Siegfried & Parry, 2003). The search for evidence to support each and every aspect of healthcare has also extended into the social and welfare services, yet the alcohol and other drug field has been slow to join this growing movement of evidence-based policy and this is especially true of alcohol and other drug policy (Siegfried & Parry). Some exceptions do exist such as laws and policies around alcohol taxation and drunk driving (Siegfried & Parry). Alcohol abuse has an enormous negative impact on public health, and while part of the solution to the abuse of alcohol in South Africa will come from macro-level development (indirect strategies), such as job creation, establishment of better recreation facilities, improvement of the country's literacy rates and the provision of education, by far the more important will be the policy process aimed at directly addressing alcohol related problems (Strachan, 1999).

Alcohol and other drug abuse is an important public health problem in South Africa (Bhana & Wilford, 1996). In the past alcohol was used as part-payment of labour supplied by farm workers (London, 1999). This use of alcohol as payment was known as the DOP system and is no longer legal in South Africa (London). However, the appetite for alcohol and other drug use in South Africa remains healthy and there is a full range of substances available to all (Maiden, 2001). Substance use patterns in South Africa vary according to age, social class, occupation, school, gender, status and geographic location (The Drug Advisory Board, 1999). The statistics for substance use in South Africa are staggeringly high (Substance abuse, 2001). A review of the South African literature on the nature and prevalence of alcohol use and abuse suggests a substantial increase in the consumption of alcohol in all communities (Maiden). Based on the findings of the Department of Health's South African Demographic and health Survey (SADHS) conducted in 1998 by the Medical Research Council (MRC) and Macro International Inc., just under half of men (45%) and one-fifth of women (17%) 15 years and older report that they currently consume alcohol (Parry, 2000).

Alcohol consumption is reported to be extremely high in South Africa (Bhana & Wilford, 1996). Access to alcohol in South Africa is extremely easy (Strachan, 1999). According to MRC reports there is one liquor store outlet for every 190 persons in the country (Substance abuse, 2001). Alcohol misuse is especially high in urbanizing populations such as informal settlements (Bhana & Wilford). Alcohol is freely available in an estimated 230 000 liquor outlets in South Africa (Health 24, 2004). The problem,

however, is not the high consumption of alcohol in South Africa, but the high levels of risky or problem drinking among certain groups (Parry, 1997). It is known that African males show a noticeable tendency to high risk drinking and that binge drinking is common among school-going children (Bhana & Wilford).

However, alcohol is not the only abused substance in South Africa; tobacco use in South Africa is an ever- increasing health concern (Reddy, Meyer-Weitz, Abedian, Steyn & Swart, 1998). The use of narcotics such as mandrax and cannabis ("dagga" as it is termed locally) is also exceptionally high (Substance abuse in, 2001). From 1995-2000 1,818,858 kilograms of cannabis was seized in South Africa (UNOCP, as cited in Gastrow, 2003). Abuse of other illicit substances such as cocaine, ecstasy and heroin also seems to be on the rise (Substance abuse in; Maiden, 2001). These is less data available on the impact of other drug abuse on the economy of the country and social development in general, but according to Parry (2000) it is likely to be considerable. Cannabis and cannabis and mandrax smoked together in a pipe remain the drugs most favoured by school-going adolescents (Hoberg, n.d.).

However, in the Western Cape the problem of "tik" has increased in recent years with more and more young people turning to this highly addictive and popular crystal methamphetamine (Cape Argus, 2005). In an attempt to change the direction of unbridled drug abuse in the province and the severe impact of "tik" on Western Cape communities, the Western Cape government has recently introduced a strategy aimed at blocking the drug supply chain, treating those who are addicted and vigorously dealing with the suppliers of the drugs (Keating, 2005; Ndou, 2005; Sapa, 2005). The strategy is aimed at combating all forms of drugs including alcohol, but is strongly focused on the "tik" pandemic. The province has been hardest hit by the introduction of "tik" in the drug market with the South African National Council on Alcoholism (Sanca) reporting that the use of "tik" has reached unprecedented proportions in the Western Cape (Ndou).

Globally cannabis is probably the most pervasive and commonly used illicit drug (Saxena & Donoghoe, 2000). There is almost certainly no illicit market that benefits Southern Africa's poor more than the thriving market for cannabis (Gastrow, 2003). It is illegal to grow and sell cannabis in South Africa, but the growing global demand determines that the earnings from supplying cannabis outweigh the risks of doing so (Gastrow). As a result of this, in the past five years Southern African countries have increasingly become global suppliers of cannabis (Gastrow). According to Interpol, South

Africa is one of the top four cannabis suppliers in the world (Gastrow). Cannabis grows wild in South Africa and is a traditional crop in many rural areas especially in the Eastern Cape and Kwazulu-Natal (Maiden, 2001). Cannabis is the largest cash crop throughout South Africa, where soil and climate conditions allow the weed to grow wild (Maiden). South Africa is not only the largest domestic market for cannabis in Southern Africa, it is also the gateway for international trafficking e.g. by sea or by air (Gastrow). South Africa now ranks among the worlds largest producers of cannabis, most of which is consumed in South Africa and Southern Africa, with some shipments made to the United Kingdom and the Netherlands (The Drug Advisory Board, 1999). Since 1990 changes in the political situation of South Africa, the opening of trade and the movement of people have been associated with the increased use of cannabis (Parry & Bhana, 1997, as cited in Saxena & Donoghoe, 2000).

South Africa's core document that deals with substance use and abuse at a national level is the National Drug Master Plan (NDMP) which was approved by the South African Cabinet in 1999 (Leggett, Louw & Parry, 2002). In 2005 the NDMP was revised and aims to intensify interventions to reduce the supply and hence the consumption of drugs (Health24, 2005).

AODs used and abused in South Africa can roughly be divided into three categories, those that are extensively used, those that are moderately used and those that are less frequently used (Parry, 1998; The Drug Advisory Board, 1999). In the category of extensive use, alcohol remains the most commonly abused substance in South Africa, followed by cannabis and the cannabis/mandrax (white pipe) combination (The Drug Advisory Board). The growing problem of crime in South Africa has severe and comprehensive impacts on the society at large (Dupraz, 2002). Victims of crimes often do not report the crime because of fear of victimization, are often denied help as therapy is a luxury that many cannot afford and some victims are so traumatized that they are unable to work or have healthy relationships. Such social withdrawals significantly contribute to pervasive substance abuse problems as well as to South Africa's alcoholism rate, which is one of the highest in the world (Dupraz).

Also in the category of extensive use is the abuse of mandrax, over-the-counter and prescription medicines and solvents (The Drug Advisory Board, 1999). Use and abuse of volatile solvents is a serious problem among abusers as young as five years old

(Maiden, 2001). Solvent abuse includes glue, aerosol sprays, dry cleaning fluid, lighter fluid, benzene, ether and gasoline (Maiden).

In the moderate use category one finds drugs such as crack cocaine, cocaine powder, heroin, speed, lsd, hashish and ecstasy. In the near future crack cocaine will need to be placed in the first category (The Drug Advisory Board, 1999). In the last category (those drugs that are less frequently used) one finds drugs such as opium, rohypnol, ketamine and wellconal (Parry, 1998).

Many substance abusers are poly-substance users (e.g. using various drugs in combination with alcohol as well as other combinations such as cocaine and heroin). In terms of pharmacological properties the substances most abused in South Africa are depressants (e.g. alcohol, white pipes) followed by hallucinogens (e.g. dagga, lsd, speed) (Parry, 1998).

The Medical Research Council (MRC) and the University of Durban-Westville established the South African Community Epidemiology Network on Drug Use (SACENDU) in 1996 to gather data on alcohol and other drug (AOD) (MRC, 1998). It is a sentinel surveillance system operating in Cape Town, Durban, Port Elizabeth and Gauteng. The system is called the SACENDU project and monitors trends in alcohol and AOD use as well as the associated consequences on a six monthly basis (Parry, Pluddemann, Bhana, Bayley & Potgieter, 1999). The project makes use of multiple sources of information gathered from hospitals, trauma units, mortuaries, and the police. The main advantage of such a surveillance system is the facilitation of an evidence-based approach to local and national policy formation opposed to having policy informed by other factors such as people's opinions, isolated studies and tradition (Parry et al., 1999). From January 1999 to June 2002, the project has reported that alcohol has remained the dominant substance of abuse across sites. The project has also reported over the last three years that the use of cannabis and mandrax, alone or in combination continues, each year, to be high across sites (Parry et al., 1999; Parry et al., 2000, 2001, 2002). Over time there has been a dramatic increase in treatment demand for heroin as a primary drug of abuse in Gauteng and Cape Town. The abuse of over-the-counter and prescription medicines continues to be an issue across sites in addition to the abuse of poly-substances remaining continuously high (Parry et al., 2000-2002). What this data indicates is that substance abuse is a major problem in South Africa that is only increasing in severity.

transitional and emotional stress (Scott & Ambroson). Most students are vulnerable to this convergence of environmental and emotional stressors and those who are not emotionally equipped to deal with such diverse and rapid change may use alcohol and other drugs as a key coping strategy that may also be a precursor to addiction (Scott & Ambroson).

Entering an uncertain phase of development, called adulthood, is not the only reason why students try drugs. There are other reasons and for the most part they are the same reasons as to why adults use drugs (Nowlis, 1970). Some of the reasons include, for a change of pace, changing ones mood, to reduce anxiety and stress, to relieve tensions and boredom, to facilitate social interaction, to sleep and just for fun (Nowlis).

Although problematic alcohol use occurs across many age groups, young adults aged 18-24 years show the highest rates of alcohol use and have the highest percentage of problem drinkers (U.S. Department of Health and Human services, 1997, as cited in Ham & Hope, 2003). Students and young adults may turn to alcohol and illicit rugs to alleviate the stress associated with the afore-mentioned changes (Beman, 1995). Whatever the cause of onset problematic alcohol use can lead to increased drug use and other delinquent activities (Beman). Knowledge of the risk factors that lead to adolescent substance use and abuse can foster greater understanding of the total problem (Beman). The following section reviews recent literature and research on the prevalence of substance abuse among university students, first internationally and then locally, in South Africa.

Substance Use: An International Perspective

The area of substance use and abuse among adolescence, youth and young adults has gained a lot of attention internationally, especially in the United States. The majority of university student research in the United States focuses on alcohol, as there is a pervasive culture of drinking at American colleges and universities (Sowdell & Wechsler, 2002; Gliksman, 1988, as cited in Prendergast, 1994). Alcohol and other drug use among college students continue at an alarming rate (Dunn & Wang, 2003). Some research in the area of university students and substance use has focused on students in countries other than the United States. The following section reviews this research. Before commencing the review of research on substance use amongst university students, the term problem drinking will be defined more clearly, as problem drinking has emerged in the literature as the most prevalent form of substance use among university students.

Definitions in the literature generally fit into one of the following two categories: (1) drinking rates or levels or (2) negative alcohol-related consequences experienced

(Baer, 2002). In researching drinking rates or levels the research may simply examine overall quantity or frequency, but these studies often employ the term "binge drinking" (Ham & Hope, 2003). Binge drinking is currently defined as the consumption of five or more drinks in a row at least once in the past two weeks for men, and four or more drinks in a row for women (Wechsler & Nelson, 2001).

Substance use at universities other than the United States of America.

Research was conducted on the use of alcohol to cope with tension, and its relation to gender, years in medical school and hazardous drinking with two nation wide Norwegian samples of medical students (Tyssen, Vaglum, Aasland, Gronvold & Ekeberg, 1998). Drinking to intoxication 2-3 time monthly or more was reported by 14% of all medical students, 24% men and 6% women. There was a significant difference between the junior and senior students in the use of alcohol to cope with tension, with senior students using alcohol to cope with tension less often (Tyssen et al., 1998).

Continuing with medical students and substance use it was discovered in a study on smoking addiction among university students in Istanbul, that smoking addiction among medical faculty students, especially females, was higher than those in foreign countries, with the number of cigarettes being smoked per day reaching almost a packet of imported cigarettes (Onal, Tumerdem & Ozel, 2002). In the same study it was also found that there was a close correlation between smoking and alcohol addiction (Onal et al., 2002).

A study that assessed the patterns of cigarette smoking, alcohol use and other substance use among Chinese university students in Hong Kong found that the most commonly used substances among the students were alcohol and tobacco (Abdullah, Fielding & Hedley, 2002). The main finding from this study is that the use of different substances (e.g. tobacco, alcohol, cannabis, and other illicit drugs) among university students in Hong Kong is not as high as university students in Europe or the United States. This may indicate the impact of cultural norms and social environments on behaviour (Abdullah et al., 2002). Generally, in Chinese societies, young people are not encouraged to smoke cigarettes and use illicit drugs. Moderate levels of alcohol are acceptable in social events, but intoxication is intolerable in Chinese society (Hong & Isralowitz, 1989, as cited in Abdullah et al.). The authors concluded that there is a need to raise awareness about the harm from the use of different substances and strengthen the education campaign on substance use in universities (Abdullah et al.).

A study that reviewed prevalence of hazardous drinking amongst New Zealand students found that these students hazardous drinking was similar to that of American college students despite the lack of formal membership to a sorority or fraternity (Kypri, Langley, McGee, Sauners & Williams, 2002). The researchers surveyed 1480 tertiary students. The major finding was that hazardous drinking is pervasive and persistent among students living in the halls of residence and that there is a great need for university alcohol policies and intervention approaches among New Zealand tertiary students (Kypri et al., 2002). Valliant and Scanlani (1996) found in their study on personality, living arrangement and alcohol use by first year university students at Laurentian University in Canada, that male university students had a higher weekly consumption of alcohol than female students and that male students living off campus and in residence were found to be at greater risk for alcohol addiction than did students living with their parents. The researchers concluded that students need to be educated on the risks of alcohol consumption and that university administrators need to create alcohol free campuses to ameliorate many of the social problems associated with alcohol consumption (Valliant & Scanlani).

When examining the lifetime use of substances among Dutch dental students, alcohol was clearly found to be the student's drug of choice (95% of the sample) with tobacco (42%) and cannabis (24%) the next most frequently used substances. This study focused on substance use among Dutch dental students at two dental schools in the Netherlands (Plaaschaert, Hoogstraten, van Emmerik, Webster & Clayton, 2001). Alcohol use was high as it was reported that in the month prior to the study 58% of students reported drinking on 5 or more days, 53% had had 5 or more drinks on the same occasion, 20% had 5 or more drinks on the same occasion on 5 or more days and 17% reported getting drunk at least once a month (Plaaschaert et al., 2001).

Reasons the students gave for using alcohol, tobacco, tranquillisers, stimulants and cannabis included to relax and relieve tension, to have a good time and to experiment (Plaaschaert et al., 2001). The authors concluded that in view of the potential risks involved in using substances to the degree reported by the students in the sample, dental schools should develop effective policies to monitor the use of substances by students and programmes to educate the students about responsible use of alcohol and other drugs (Plaaschaert et al.). The authors also suggested that dental schools should inform students about their susceptibilities to substance abuse and dependency (Plaaschaert et al.).

The studies that sampled medical students suggest that there is a problem of substance use among medical students (Onal et al., 2002; Tyssen et al., 1998). Many

reasons can be attributed as the cause of this. However, it is beyond the scope of this literature review to examine those reasons. The common theme identified from the other studies is that there is a lack of university involvement in combating substance use and that there is therefore a great need for increased university involvement in preventing and dealing with substance use amongst university students.

Substance use at American universities.

Alcohol

Student drinking during the college years is a significant public health concern (Ham & Hope, 2003). No topic in alcohol research has been more intensively studied and widely debated in the past ten years as American university student's alcohol use and associated problems (Berkowitz, 1994; Dowdall & Wechsler, 2002; Knight et al., 2002).

For the majority of college students, alcohol consumption is an important aspect of the college experience (Harford, Wechsler & Seibring, 2002). Although, in recent times, other drugs have been the most visible targets of the nationwide drug war in the United States, the prevalence of alcohol use and its resulting problems involve far greater numbers of students than do other drug related problems (Presley & Meilman, 1994).

In the literature it was estimated that 500 000 college students aged 18-24 in the United States suffer unintentional injuries while under the influence of alcohol and 1400 die each year from alcohol related injuries (Hingson, Heeren, Zakocs, Kopstein and Echsler, 2002, as cited in Wechsler et al., 2003).

Alcohol use and abuse amongst American youth has been a focus of government policy since the mid 1970's (Chaloupka & Laixuthai, 1997). When the voting age was changed to 18 years, several American states subsequently lowered the minimum legal drinking ages (Chaloupka & Laixuthai). The consequent increase in youth alcohol abuse, mainly in drinking and driving, led many states to rethink this policy (Chaloupka & Laixuthai). In 1984, the federal government of the United States of America became involved by enacting the Federal Uniform Drinking Age Act that required all states to increase their drinking ages to 21 years of age. The higher drinking ages succeeded in reducing alcohol use amongst youth (Coate & Grossman, 1988 and Saffer & Grossman, 1987, as cited in Chaloupka & Laixuthai, 1997). However drinking, drunken driving and

other measures of youth alcohol abuse remain exceptionally high. The following studies will highlight this.

Substance use at American universities is characterised mainly by the use of alcohol (Prendergast, 1994; Licciardore, 2003), with cannabis coming in at a distant second, and then cocaine (Prendergast). However, compared with the knowledge gained through research on university alcohol use and abuse, there is little known about the extent of illicit drug use among university students and there is even less known about the problems associated with such use within this population (Prendergast). The following section reviews studies that researched substance abuse on American university campuses. Firstly studies on alcohol use and abuse will be reviewed and then secondly research on other drug use and abuse will be reviewed.

The extent of alcohol use and other drug use among American college students was reviewed in an article that examined five different sources of data, national in scope, for estimating recent levels of alcohol and other drug use among college students (O'Malley & Johnston, 2002). The sources differed with respect to population coverage, data collection methodology, instrumentation and period of data collection.

After examining these five sources of data it was discovered that alcohol use rates are very high among college students with approximately two out of five students being heavy drinkers (defined as having had five or more drinks in a row in the past two weeks) (O'Malley & Johnston, 2002). Other results indicated that alcohol use is higher among male than female students and white students are highest in heavy drinking, whilst black students are lowest and Hispanic students are intermediate. College students engage in heavy episodic drinking at higher rates that their same age peers who do not attend college (O'Malley & Johnston). The authors concluded that more must be done to reduce heavy alcohol use among students by universities and colleges (O'Malley & Johnston).

The above results coincide with The Annual National Household Survey on Drug Abuse (NHSDA) (2001) sponsored by the Substance Abuse and Mental Health Services Administration (SAMHSA) of the United States of America, which found that rates of heavy alcohol use among young adults were highest for males, whites and full time undergraduate students.

A study that assessed college student's binge drinking habits indicated that 41.5% of the respondents were current binge drinkers with men more likely than women to binge drink and that white students were significantly more likely than black and Hispanic students to binge drink (Jones, Oeltmann, Wilson, Brener & Hill, 2001). These results concur with the results from O'Malley's and Johnston's (2002) study and The Annual

National Household Survey on Drug Abuse (NHSDA) (2001). These studies indicate that there is a problem of alcohol use and abuse amongst white males at American universities.

The Harvard School of Public Health College Alcohol Study (2003) examined the role of college student demographics and diversity in moderating binge drinking among high-risk students. The study-analysed data from 52312 university students at 114 predominantly white universities from the 1993, 1997, 1999 and 2001 College Alcohol Study surveys. Results showed that the binge drinking rates of white, male and underage students were significantly lower in universities that had more minority, female and older students (Wechsler & Kuo, 2003).

The findings of the study showed that greater diversity on university campuses may serve as a risk protective factors, even for those students who engaged in binge drinking in high school (Wechsler & Kuo, 2003). The study found that incoming white freshman who did not binge drink in high school were less likely to start binge drinking in university if their universities had higher proportions of African-American, Latino, Asian and older students (Wechsler & Kuo). Incoming white freshman that were binge drinkers in high school were less likely to continue this pattern of behaviour if their university had higher percentages of minority and older students (Wechsler & Kuo). This study concluded that universities wishing to reduce their binge drinking problems should examine student-body composition and demographic diversity (Wechsler & Kuo).

The results of this study are extremely pertinent as it suggests practical solutions for predominantly white universities that include (a) creating a campus environment that attracts a diverse student population, (b) increasing the number of minority students on campus, (c) encouraging more women and older students to live on campus and (d) decreasing the heavy concentration of likely high-risk drinkers who are overwhelmingly young, male and white on campuses (Local6.com, 2003). Increasing diversity on college campuses could result in a decline in alcohol and other drug abuse among the identified risk group of white males (Local6.com).

The Annual National Survey on Drug Use and Health (NSDUH) (2003) reported that fulltime students aged 18-21 had higher rates of binge drinking than non students and non students were less likely than full-time students to drive while under the influence of alcohol. Overall full-time college students were less likely to perceive great risk in weekly binge drinking. The rate of past year alcohol dependence or abuse was higher among full-time college students than non students overall and the differences were statistically significant for ages 21-22 (NSDUH).

Data from the 1999 College Alcohol Study were used to examine how students defined the term binge drinking, to determine how much binge drinking the students think exists at their college and to analyse how students estimates compared with aggregated self-reports of student drinking (Wechsler & Kuo, 2000). Responses from a randomly selected sample of 14138 students at 119 nationally representative colleges in 40 states were used to answer the above research questions.

The researchers found that at the median half of the students define the term binge drinking as 6 drinks or fewer in a row for men and 5 drinks or fewer in a row for women, 1 drink higher that the definition used by the researchers (Wechsler & Kuo, 2000). The students defined the term in relation to how much they themselves drink. Frequent binge drinkers defined the term as 8 drinks in a row for men and 6 drinks in a row for women, whereas abstainers use the lower limits of 5 and 4 drinks, respectively (Wechsler & Kuo).

The authors findings indicated that whether or not students perceived alcohol to be a problem on their campus was related to the students own drinking behaviours as well as to the levels of drinking on their campus (Wechsler & Kuo, 2000). Overall about half of all students, a majority of abstainers and numbing drinkers, and a minority of occasional and frequent binge drinkers, consider students' alcohol use on their campus to be a problem. Half of the students (47%) underestimated the binge-drinking rate at their college, 29% overestimated it and 13% were inaccurate. At the median the sample estimated that 35% of all students binge drink (Wechsler & Kuo). Overall, the authors found that binge drinking is high and is indeed a problem that needs to be looked at and managed across universities in the United States (Wechsler & Kuo).

The CAS (college alcohol study) (1999) findings clearly demonstrate that binge drinking is prevalent on most university campuses. Nationally, two in five students binge drink. These students experience a higher rate of various educational, social and health problems than their non-binging peers. Half of the students who binge drink do so more than once a week and half of these frequent binge drinkers report having five or more different alcohol-related problems during the university school year (Wechsler, Nelson & Weitzman, 2000).

Research that addressed individual variation in drinking among college students reviewed research conducted prior to 1986 and after 1986 with the aim of examining individual factors in relation to alcohol consumption among college students (Baer, 2002). Pre-1986 research on individual variation focused mainly on traditional aspects of personality to explain why some students drink more than others (Baer). Drinking motives were examined as a means of understanding different needs that alcohol might fulfil for college students. A pattern of behaviour characterised by sensation seeking,

impulsivity and non-conventionality was consistently related to increased drinking (Baer). Research pre-1986 attributed that problem drinking behaviour was more influenced by personal, emotion coping motives than social motives for drinking (Baer).

Research since 1986 is highly variable in quality with new dimensions of individual differences having been developed and assessed, including expectancies of alcohol effects, better measures of drinking motivation, assessment of perceived norms for drinking and assessment of drinking contexts (Baer, 2002). It has now become the norm in alcohol related research to assess both the drinking rates and drinking problems. Research over the past 15 years is consistent with the research that preceded it. However, very recent research suggests that sociability and extraversion may play a specific role in the etiology of drinking within the college context (Baer).

In summary the above studies found that both impulsive/sensation drinking and stress/anxiety based drinking are associated with increased drinking rates and increased negative consequences of drinking (Baer, 2002). Some evidence that stress/anxiety-based drinking is associated with long-term and more severe consequences was also highlighted. Yet even highly social drinking behaviour results in negative outcomes for college students. Baer therefore suggests that future research should examine if different drinking motives result in different kinds of drinking problems. Research also needs to be undertaken that examines alcohol related behaviour longitudinally as opposed to only one point in time, to assess the developmental aspect of alcohol abuse, use and dependence (Baer). Baer concluded that equipped with new information on risk factors and developmental processes, health care workers and university administrators will be better able to identify and reach those students most in need of services and adjust the content of existing prevention programmes for maximum effectiveness.

Associations between coping responses (how one copes under stress and pressure), motivations for drinking (why one drinks), social and academic expectations, family of origin problem drinking, measures of college students quantity and frequency of alcohol use and social complications of alcohol use were investigated in 218 college students at the University of Montana (Karwacki & Bradley, 1996). The 218 students, 91 males and 127 females were all undergraduates and voluntarily participated in the study. A questionnaire packet was administered to several large groups over a two-month period (Karwacki & Bradley).

Results indicated that when the coping strategies of self-blame, detachment and keeping to ones self are applied in stressful situations, there is a higher possibility of an associated increase in alcohol use and associated social complications (Karwacki & Bradley, 1996). Other strategies, mainly problem solving strategies, were less likely to be

associated with an increase in alcohol use and use complications. Using social supports also emerged as a strategy that was less likely to be associated with increase in alcohol use (Karwacki & Bradley).

With regards to drinking motives, results indicated that the more motives a person has for drinking, the more likely they are to use alcohol frequently and therefore experience more complications of use (Karwacki & Bradley, 1996). Results indicated that a low expectation of a perceived inability to achieve important goals is related to greater alcohol intake and related social complications. Results supported the social learning theory that purports that family models are an influential factor that can contribute to the likelihood of excessive alcohol use and social problems associated with that use (Karwacki & Bradley).

These results suggest that the variables measured in the study (coping mechanisms, drinking motives, expectations of goal attainment and family models) are relevant for educators and health care providers to consider in prevention and intervention efforts with university students (Karwacki & Bradley, 1996).

The College Alcohol Study (CAS) administered surveys to representative samples of college students at 119 colleges in 39 states in the United States of America in 1993, 1997 and 1999. Results from comparing the surveys from the three different years indicated that all three years yielded remarkably similar rates of binge drinking, with two out of 5 college students being classified as binge drinkers in all three surveys (Wechsler, Lee, Kuo & Lee, 2000). No change occurred in the overall binge-drinking rate; however changes did occur in the nature of drinking among students who do drink, becoming extreme, with a significant increase in heavier drinking throughout the six years (Wechsler et al., 2000). A noted increase in the number of frequent binge drinkers between 1993 and 1999 was seen, as well as in the proportion of students who were drunk three or more times, who drank on 10 or more occasions, who usually binged when they drank and who drank to get drunk (Wechsler et al.).

The rates of frequent binge drinkers increased from 23.4% in 1993 to 28.1% in 1999, whilst the rates of abstaining from alcohol increased from 15.4% to 19.2% in 1999 (Wechsler et al., 2000). Over the 6 years, binge-drinking rates decreased amongst students who lived in dormitories and increased among students living off campus (Wechsler et al.). This result is significant as it contradicts an earlier study that found that current living arrangements of college students did not influence their current alcohol consumption (Schall, Weede & Maltzman, 1991).

Wechsler et al. (2000) concluded that although it may take more time for substance and alcohol use and abuse interventions to take effect, the actions that college

heath providers have undertaken thus far may not be sufficient, and hence more involvement is needed from colleges in combating binge drinking among college students. This conclusion coincides with the recommendations made by Baer (2002), that highlight the importance of more research being conducted in order to facilitate university personnel's interventions on alcohol and other drug use and abuse. New information from research and more involvement from universities can possibly lead to better interventions and hence a decline in alcohol and other drug abuse on American college campuses.

In a research study aiming to identify person, social group and environmental factors associated with the uptake of binge drinking among a national sample of United States college students found that students who reported that they were exposed to "wet" environments (environments including social, residential and market surroundings in which drinking is prevalent, and environments where alcohol is cheap and easily accessible) were more likely to engage in binge drinking than were their peers who were not exposed to "wet" environments (Weitzman et al., 2003). Those students who took up binge drinking in college were more likely than their peers, who did not take up binge drinking, to report inflated definitions of binge drinking and to favour a younger age for legal consumption (Weitzman et al.). The researchers concluded that reducing binge drinking in college would require efforts to limit the accessibility and availability of alcohol, control cheap prices and maximise substance free environments and organisations, in other words utilise a comprehensive prevention approach to prevent the acquisition of student binge drinking whilst at universities. (Weitzman et al.).

The impact of current residence on the drinking habits of college students was identified in a study by Harford, Wechsler and Muthen, (2002). The data for this study was drawn from the College Alcohol Study (CAS) surveys conducted in 1993, 1997 and 1999, of undergraduate students at four-year American colleges already mentioned above. The sample for this study was based on 119 participating colleges that had response rates of at least 50 % in 2 of the three years, and no less than 40 % in the third year (Harford et al., 2002). When compared with students living in single-gender dormitories, students living off the college campus with their parents reported lower alcohol-related problem consequences and a higher possibility of driving whilst under the influence of alcohol (Harford et al.). Students living off campus without parents, compared to students in single-gender dormitories reported a higher probability of drinking/driving. Associations between off-campus living and probabilities of drinking/driving were mediated by drinking frequency (Hardford et al).

The same study also showed that students living in co-ed dorms incurred more problem consequences related to drinking when compared with those students who lived

in single-gender dorms (Harford et al., 2002). Co-ed dorm students were also less likely to report drinking/driving than students who lived in single-gender dorms. The above study is restricted to students between ages 18 and 22, who were never married and reported using alcohol in the past therefore the authors stress that care must be taken when generalising the above results to other studies of collegiate drinking patterns (Harford et al.). The authors conclude that the presence of environmental factors and their effects on college student drinking i.e. college residence affecting alcohol intake, means that there is a need for specific and targeted intervention approaches to alcohol prevention on college campuses (Harford et al.).

To determine whether alcohol outlet density was related to heavy and frequent drinking and drinking-related problems, a study was performed that compared ecological measures of alcohol outlet density with survey measures of drinking using a geographic information system and the Harvard School of Public Health College Alcohol Study (sample size of 3421 and 8 colleges) (Weitzman, Folkman, Folkman & Wechsler, 2003).

The researchers identified 966 alcohol outlets within eight, two-mile study areas. Densities ranged from 32 to 185 alcohol outlets within the two-mile radius, with an average of 121 alcohol outlets per site (Weitzmann et al., 2003). Overall there was a significant correlation between outlet density and heavy drinking (i.e. consumed 5 or more drinks in an off campus location) for all drinkers. The researchers found notable associations between outlet density, frequent and heavy drinking and drinking-related problems among all student drinkers (Weitzman et al.). This research is highly pertinent as it informs university policy and prevention programmes.

The above three studies, the first on exposure to wet environments, the second on residence impact on alcohol use and the third on alcohol outlet density and its impact on alcohol abuse all highlight important environmental factors that contribute to binge drinking on college campuses (Weitzman et al., 2003; Harford et al., 2002; Weitzman et al., 2003). The first study examined the idea that exposure to availability of alcohol (wet environments) increases the possibility of alcohol use and abuse (Weitzman et al). The second study indicated that residence is a moderator of alcohol use and abuse i.e. students living at home with parents where there is possibly a lack of alcohol availability were less likely to drink opposed to those students living in dorms where alcohol is more freely available (Harford et al). The third study suggested that physical availability of alcohol in terms of outlet density is also a moderator of alcohol use and abuse; with closer (in terms of distance) alcohol availability significantly correlating with frequent and heavy drinking and drinking related problems (Weitzman et al.). These three studies speak to the issue of alcohol availability.

stimulants appeared to be pervasive in this college sample, which could be an indicator of a wider national problem (Graff Low & Gendaszek).

Bortsford (2001) reported in the NCADI (National Clearinghouse for alcohol and drug information) report that Americans are using and abusing prescription drugs more than ever before, citing from the new Prescription Drugs: Abuse and Addiction Research report that approximately 4 million people ages 12 years and older misused prescription drugs in 1999. The prescription drugs typically misused and abused are sedatives, stimulants, tranquilisers, painkillers and opioids for nonmedical purposes (Bortsford).

In the article written by O'Malley and Johnston (2002) on the extent of alcohol use and other drug use among American college students, it was reported that college students despite being distinctly higher than non-students in their alcohol use, were discovered to be lower in their use of cannabis, cocaine and cigarettes. This implies that the greater level of alcohol use among college students does not reflect a general tendency to use more psychoactive substances and that there are aspects of the college environment that are specific to alcohol and that are specifically inclined to supported alcohol drinking and not other drug use (O'Malley & Johnston).

However, results from a study which assessed binge drinking among undergraduate college students in the United States and its implication for other substance use found that the more students binge drank, the more likely they were to have used cigarettes, cannabis, cocaine and other drugs and the more likely they were to report current use of cigarettes and cannabis (Jones et al., 2001). 4 609 undergraduate students aged 18-24, from 148 universities and colleges, participated in the study by completing a self-administered questionnaire. This study relates to the Gateway hypothesis that suggests that alcohol use can lead to the use of harder drugs (United Nations International Drug Control Programme, 2000).

A study that examined the prevalence and changing patterns of ecstasy use among college students found that the prevalence of past year ecstasy use rose from 2.8% to 4.7% between 1997 and 1999, which indicates an increase of 69% (Strote, Lee & Wechsler, 2002). Ecstasy users in the sample (nationally representative sample of over 14 000 college students at 199 U.S four-year colleges) were more likely to use cannabis, engage in binge drinking and smoke cigarettes (Strote et al., 2002). The authors concluded that ecstasy use is a high-risk behaviour among college students, which has increased, rapidly in the past decade (Strote et al.).

The above studies on illicit drug use on American college campuses paints a bleak picture with the results of these studies indicating that illicit drug use among American college students is on the rise (Strote et al., 2002; Jones et al., 2001). Despite this it is

evident from the literature that binge drinking and drinking in general among American college students is the most prevalent form of substance use and hence presents a major public health concern (Baer, 2002; Ham & Hope, 2003; Jones et al.; O'Malley & Johnston, 2002).

Research on the extent of the problem of university student alcohol use and abuse is detailed and persuasive (Gordis, 2000). Binge drinking is a pervasive problem on university campuses (Bradley & Miller, 1997). Binge drinking is of particular concern not only because of its risks to the binge drinker but because of the problems it creates for those around the drinker (Gordis). Heavy drinking, alcohol abuse and alcoholism are most prevalent among 18 through to 29 year olds of both genders (the age group of college students) (Bradley & Miller). Another important reason for concern about adolescent alcohol use and abuse is its close association with the use of other drugs (O'Malley, Johnston & Bachman, 1998). There is evidence that alcohol use tends to precede use of illicit drugs (O'Malley et al., 1998). Another important reason for the huge concern about adolescent alcohol use and abuse is the risk of serious social, medical, financial and legal problems that can result from alcohol consumption, such as impaired performance at school, interpersonal problems, physical and psychological impairment and drunk driving (O'Malley et al.).

The identification of factors that may promote excessive drinking during college years is essential for developing and refining interventions to decrease heavy drinking and its associated negative consequences (Wood, Read, Palfai & Stevenson, n.d.). This type of research must be a priority of university personnel to inform interventions that deal with the correct factors that promote heavy drinking (Wood et al., n.d.).

Overall the above review of research on alcohol and other drug use and abuse on American college campuses indicated the following: White males are a high risk group for alcohol use and abuse, fulltime students are more likely to use and abuse alcohol opposed to non students (Wechsler & Kuo, 2003; Local6.com, 2003), drinking motives are important to consider when researching alcohol use and when planning interventions (Karwacki & Bradley, 1996), the availability of and accessibility to alcohol is a moderator in alcohol use and abuse with the less available alcohol is, the less likely students are to drink and binge drink opposed to the more available alcohol is, the more likely students are to drink and binge drink (Weitzman et al., 2003).

The above studies have shown that illicit drug use is on the rise (Strote et al., 2002; Jones et al., 2001), alcohol use and abuse leads to illicit drug use (O'Malley et al., 1998), alcohol is the most pervasive form of substance use among American college students (Ham & Hope, 2003; Baer, 2002; Jones et al.; O'Malley & Johnston, 2002) and

finally universities need to be involved in dealing with alcohol and other drug use on campuses by providing relevant information and appropriate interventions (Wechsler et al., 2000; Baer; Karwacki & Bradley; Weitzman et al.; Harford et al., 2002)

Limitations in the research reviewed here is that much of the research involved self-report questionnaires given in one session and there are few observational studies or longitudinal studies of college student drinking and other drug use in relation to individual differences (Baer, 2002). Certainly it seems that there is a pressing need for more observational and longitudinal studies of college drinking behaviour and associated psychosocial variables (Ham & Hope, 2003). The common practice of employing self-report questionnaires may limit causal interpretability of the results and furthermore the generalisability of these studies is often compromised due to the use of convenience samples, i.e. students in the psychology subject pool (Ham & Hope). The College Alcohol Study (1993, 1997, 1999, 2001) reviewed above does not have this limitation, as it is a national level study of college student drink behaviour.

The following section of the literature review focuses on research done with students at South African universities.

Substance Use: A Local Perspective

Substance use at South African universities.

Substance use and abuse is a pervasive problem in South Africa (Bhana & Wilford, 1996; Gastrow, 2003; Maiden, 2001; Parry et al., 1999; Parry et al., 2000-2002; Reddy et al., 1998; Strachan, 1999; Substance Abuse, 2002). The effective prevention of health problems and other consequences of alcohol and other drug use and abuse requires information on the prevalence, characteristics and patterns of use, together with information on the problems associated with that use (Saxena & Donoghoe, 2000). This section will review research that focused on substance use and abuse among South African university students.

It seems that traditional concern about the youth as the future of South Africa and periodic portrayals in the media of severe use of drugs other than alcohol and tobacco among the country's youth have contributed to research into this issue (Rocha-Silva, 1998). However, much of the research in the area of youth/adolescent substance abuse focuses on South African school-going children. Despite this, a few salient studies on

substance use with South African university students have been conducted (Parry, 1998; Parry, 2000).

There has been a significant increase in the use and abuse of alcohol and other drugs among young South Africans (Peltzer & Phaswana, 1999). Many adolescent substance abusers in South Africa start with alcohol use and progress quickly to the use of other drugs (Hoberg, n.d.). In response to this increase and rapid progression a study on the prevalence, patterns and experiences of drug use (especially alcohol and cannabis) among South African University students at the University of the North was conducted (Peltzer & Phaswana).

What the results indicated was that alcohol, cigarettes, glue and cannabis were the four most prevalent substances used. The majority of respondents reported that their first experience of alcohol and cannabis was at age 17 or older (Peltzer & Phaswana, 1999). When asked where the students got their alcohol, they responded that alcohol was everywhere and was sold in student residences, student and staff cafeterias and restaurants, shebeens and bottle stores (Peltzer & Phaswana). There were perceptions that cannabis and to some extent alcohol were/are functional drugs opposed to recreational drugs (Peltzer & Phaswana). These perceptions of the functionally and occupationally positive role of cannabis are not widely reported in the Western literature and therefore there is need for more research on this idea (Peltzer & Phaswana). According to the authors, the significant increases in the current use of alcohol and cannabis and other drugs are difficult to explain (their research just having touched the tip of the iceberg). They therefore, suggest further qualitative and quantitative studies on the factors affecting the increase of the substance abuse on university campuses in South Africa (Peltzer & Phaswana).

A survey study conducted at the University of the North looked at substance use among first year university students at the latter university (Peltzer, Malaka & Phaswana, n.d.). This study was used as a baseline assessment for primary prevention intervention (Peltzer et al., n.d.). The sample included 799 first year students chosen randomly from the total first Year University of the North student population. There were 441 males and 358 females in the age range 16 to 35 years, who participated in the study by completing a questionnaire. The questionnaire was the WHO Model Core Questionnaire on substance use that was developed by the World Health Organisation. Results indicated that past month or current substance use was most common for using alcohol drinks (22.2%), smoking cigarettes (12.8%), other opiate type drugs (6.9%) and cannabis (6.6%) (Peltzer

et al., nd). Tobacco, alcohol and cannabis use was strongly associated with each other indicating the poly substance use of tobacco, alcohol and cannabis (Peltzer et al.). Poly drug use is defined as the use of more than one psychoactive drug either simultaneously or at different times and either intentionally or inadvertently (Drugscope, 2000; EMCDDA, 2002; Forcon, 2004). The term poly drug use is often used to distinguish persons with a more diverse pattern of drug use from those who use only one kind of drug exclusively (United Nations International Drug Control Programme, 2000).

The five substances most frequently used among the sample were in order of prevalence, alcohol, tobacco, cannabis, other opiate drugs, and inhalants (Peltzer et al., n.d.). The results also showed that cocaine, amphetamines, amphetamine type stimulants, tranquillisers and smoke-less tobacco were more often taken once the student had entered university opposed to alcohol, volatile inhalants, cigarettes, cannabis and other opiate type drugs which were taken mostly before entering university or before the age of 18 (Peltzer et al.). The authors noted that any meaningful response to the problem of substance use and abuse must meet the problem head on, namely at the level of attitudes and understanding which in turn affect behaviour (Peltzer et al.). The results from this study will form the basis of recommendations for substance use and abuse prevention among university students. The areas pf particular note for prevention are: men drinking alcohol, smoking cigarettes and cannabis, women taking amphetamines and other opiate type stimulants, binge drinking and finally poly substance use (Peltzer et al.).

A study using the same sample investigated drinking motives, behaviour and problems among black South African University of the North students. Results indicated that past month use of alcohol was 22.2% (Peltzer, 2003). The percentages of current drinkers (n=153) who had experienced alcohol related problems was high, with 34% of students spending too much money on alcohol and 23% engaging in unplanned and 22% in unprotected sexual activity (Peltzer). The most predominant drinking motive was social, followed by enhancement and then coping. Social and enhancement drinking motives were predictors for drinking problems (Peltzer).

Consistent with studies on American college campuses reviewed earlier, was that male university students drank more alcohol than women students and experienced more alcohol related problems than the university women drinkers (Peltzer, 2003). On a practical level these results may suggest that intervention approaches regarding alcohol

use and abuse may benefit from considering the different motives for alcohol use and abuse in a specific cultural and gender context (Peltzer).

Alcohol use among sixth year medical students at the University of the Free State (UFS), was discovered to be a significant problem with a number of sixth-year medical students (28.3%) using alcohol in a harmful way, especially when they were with friends or in a social setting (Marais, Claitz, Rataemane & Joubert, 2002). A number of students also reported using alcohol to cope with stress. There was no significant difference between the response rates of men and women with the total response rate being 74.2% (Marais et al., 2002). The authors concluded that it is important that the prevention of the harmful use of alcohol should receive significant attention at university medical schools throughout the students training (Marias et al.). This research corresponds with research cited earlier in this review, which also focused on substance use and medical students. The results of that research showed that drinking to intoxication 2-3 times a month or more was reported by 14% of all medical students with a number of junior students reporting alcohol use to cope with tension (Tyseen et al., 1998).

A research project that examined the prevalence and nature of problematic parent-child relationships and problems regarding sexuality and alcohol/drug abuse among African adolescents found that the majority of the 378 South African university students (ages 17-26) who were considered to be in the late-adolescent phase, that participated in this research regarded adolescent use and abuse of all drugs, including alcohol, as a serious matter (Pretorius, Ferreira & Edwards, 1999). The reasons offered for teenage substance abuse were an unhappy home environment, peer pressure and as a coping method (Pretorius et al., 1999).

The relationship between adolescent alcohol use and self-consciousness was surveyed in a random sample of 543 subjects, 269 who were male students and 274 who were female students (Pluddemann, Theron & Steel, 1999). All students were second year university students at the University of Stellenbosch from various faculties (Pluddemann et al., 1999). The age range was from 19-25 years with a mean age of 19.7 years (Pluddemann et al.).

From the results it would seem that there is more cause for concern regarding adolescent males as far as alcohol use is concerned than adolescent females (Pluddemann et al., 1999). This result is supported by previous research reviewed above that identified males as a high-risk group for alcohol binging (Peltzer et al., n.d.). As many as 33% of the males in the present study reported drinking 3 times per week or more, and 30.5% of

those that drank alcohol, drank 6 or more drinks per occasion. 12% of the males reported that they always drink to get drunk (Pluddemann et al.). These findings support the general consensus in South African literature that there is a major cause for concern regarding adolescent alcohol use, especially among adolescent males (Pluddemann et al.). Although there are persons that say that adolescent drinking is a stage that one goes through and that adolescence is a time when drinking is inflated when compared to the rest of a person's life, according to the authors, it remains a fact that alcohol is a drug which can lead to addiction and is the cause of many unnecessary road accidents (Pluddemann et al.). Therefore, the authors conclude that university students should not be excused from responsible drinking practices. Clearly there needs to be an increase in awareness of the effects and dangers of misusing alcohol (Pluddemann et al.).

The next section of this literature review reviews literature on university prevention of and intervention in substance use on university campuses. This section will focus on general literature on policy formation and implementation and university intervention in substance use.

Policy, Prevention, and Intervention

Prevention and Interventions for Substance Use and Abuse at South African Universities

The above review has highlighted alcohol as the primary substance of use on college campuses in the United States. In South Africa it was seen that alcohol followed by cannabis were the two main drugs of use amongst youth. A recurring theme throughout the research was the need for university officials to get more involved in dealing with substance use and abuse on their campuses. It is highly important for universities to offer support to students around the issues and consequences of substance use as the use and abuse of alcohol and other drugs affect all aspects of campus life, from economics to personal relationships (Charney, 1994). There are many negative consequences of alcohol use and reducing the misuse of alcohol on college campuses should be a top priority for college administrators and university health personnel (Faden & Baskin, 2002).

A comprehensive review, as presented in a paper read at the XIth International Conference on Alcohol, in Liverpool UK, April 1998, of research projects conducted

between 1962 and 1996 pertaining to alcohol and drug use among the youth of South Africa (10-24 years of age) highlighted the following: (a) drinking is mainly a male phenomenon (b) enjoyment, mood-change and coping are particularly common reasons for drinking, (c) youthful drinking tends to be associated with participation in festivities, (d) cannabis is the illicit drug that is most generally used by young people, (e) solvent use such as glue sniffing is also very common among the youth of South Africa, and especially within certain subgroups such as street children and (f) the use of other drugs such as tranquillisers, sedatives, heroin and cocaine also occurs among South African Youth, but less frequently than in the case of licit drugs and use of cannabis and inhalants (Brewis, 1999).

The National Strategic Action Plan for the Prevention of substance abuse among the youth of South Africa, from here on referred to as the National Strategic Action for Plan (NSAP) was developed by the South African Alliance for the Prevention of Substance Abuse (SAAPSA) in response to the above mentioned problems and research data (Brewis, 1999). It serves as a framework for the implementation of primary prevention projects and actions at the national, provincial and community levels. The overall aim of the NSAP is to synchronise efforts at preventing substance abuse among South African youth. It encourages networking among all organisations, government and civil society, concerned with preventing substance abuse in South Africa (Brewis).

In drafting the NSAP the following risk factors for substance abuse among south African youth were identified: (a) availability of drugs, (b) cultural norms and values regarding alcohol and other drug use and abuse, (c) ineffective law enforcement and drug trafficking, (d) the social environment – poverty, peer pressure, family violence, influence of media, rebelliousness and prostitution, (e) lack of resources such as unemployment, no recreational facilities and lack of prevention and treatment facilities and (f) skills and knowledge in terms of poor socialisation skills and high school drop-out rate (Brewis, 1999).

The NSAP focuses on children, young people and young adults i.e. the age range 5 to 35 years. This age range is in line with the definition of youth in South Africa, used, for example, by the Youth Commission (Brewis, 1999).

There is a general agreement today about the nature of the problem of alcohol and other drug use on university campuses (Wechsler et al., 2000). An increasing number of students are being blocked from educational advancement and are not realising their full

potential because of alcohol and drug use and abuse (Cummings, 1997). Alcohol abuse rates vary at different colleges and this suggests that institutional approaches should be shaped by the particular conditions of a given campus (Wechsler et al.). "There are no one-size-fits-all solutions" and prevention planners cannot expect to rely on a single "canned" prevention programme (Gilchrist, 1994; Wechlser et al.). Many factors affect a prevention initiatives success. A program developed in one environment may not translate well to another (Gilchrist).

Thus, there is a need for research that not only investigates the prevalence of substance use and abuse but also looks at the interventions and programmes that are currently in place and those that should be in place (Gilchrist, 1994). During the last 30 years the amount of research and theory related to the prevention of alcohol and other drug use has increased considerably (Gilchrist). However, this increase in attention has not always been well focused or systematic (Gonzalez, 1994). Most alcohol and drug-related research has simply described current rates and patterns of use. A second category of research has focused on identifying precursors and predictors of adolescents' drinking and other drug use (Gilchrist).

For the most part, these studies have been fragmented and have not provided practitioners with consistent direction to design effective alcohol and other drug prevention programs (Cummings, 1997). There has also been a lack of current preventative programs and a lack of a theoretical perspective to help define and interpret relevant data (Cummings). Relevant research is scarce and one-dimensional (Cummings) and thus the development of preventive interventions and programs has proceeded somewhat separately from that of the descriptive research (Gilchrist, 1994).

Drug epidemiological research on tobacco, alcohol and other drugs has and should inform the field of substance use and abuse prevention. Johnston (1997) outlines eight ways in which drug epidemiological research has and should influence substance use and abuse prevention: (1) epidemiological studies (E studies) provide continuous information on the types of drugs most widely used, their changing forms of administration, and some of the problems which are caused by their use, thereby serving an agenda-setting function, (2) E studies document the ages of initiation and cross-time changes in substance use and abuse helping to target preventions at appropriate age groups, (3), E studies help define the subgroups of the population that are most at risk of developing drug use patterns and problems of different kinds, (4) ongoing E studies provide information on what would

different perspective from primary prevention (Coyne et al.). To reduce the incidence of a designated problem in a targeted group, efforts are directed at lowering stressors and increasing supports so that dysfunction is lowered and eradicated in designated target group members (Coyne et al.). Primary prevention uses two main methods for intervention: (1) competency enhancement and wellness, which involves education, training and information giving in order to enhance the life-styles of people and (2) human systems change which involves altering policies, procedures, structures and cultures through planned change strategies and consultation in order to provide sufficient support. For primary prevention goals to be reached, both competency enhancement and human systems methods are necessary (Coyne et al.).

The first step in creating prevention programmes and increasing school based interventions in the area of student substance use and abuse is to create a substance use policy. Students, whose schools lack clear alcohol and other drug policies, are more likely to experiment with substances (Gaustad, 1993). While good policy alone cannot reduce alcohol and other drug use, it is the crucial and vital foundation for an effective effort against alcohol and other drug abuse (Gaustad). Alcohol and other drug policies are essential as they make a public statement that educators and university administrators are aware of and concerned about the problem (Gaustad). Policy's establish a long-range set of goals and creates an overall tone that will support specific actions (Gaustad).

The aims of any alcohol and drug prevention program directed at young people should be realistic, with the main goal being the prevention or reduction of harms associated with alcohol and other drug use, as opposed to preventing use completely (Alcohol and Drug Prevention, 1999). Alcohol and drug prevention programmes should be comprehensive, including different components that complement each other, such as media campaigns, in school programmes, and policy interventions (Alcohol and Drug Prevention). Alcohol and drug education programmes should be continuously evaluated in an effort to determine what works and what does not work. Already known is that zero tolerance and other "hard line" approaches such as strict enforcement of regulations in an effort to maintain an alcohol and drug free environment do not work and may increase the risk of serious problems (Kuh, 1994). These programmes tend to end up punishing students who are experimenting, as most young people do, and discouraging those students who are at risk of developing problems from getting the help they need (Alcohol and Drug Prevention).

Because substance use is a necessary precondition to abuse and dependence, prevention efforts can and should be directed at initial use, continuing use, or progression in use to block the later development of substance dependence and addiction (US Congress, 1994).

Designers of prevention programs must concretely define the program's mission and boundaries i.e. what the program is and is not expected to accomplish (Gilchrist, 1994). All prevention programs have a political aspect or rationale that sustains and supports them. To be successful preventative interventions demand considerable energy and resources (Wechsler & Weitzman, 1996; Gilchrist). The correspondence between the shape, focus and rationale of the initiative with the community, teacher and school administrator's definitions of appropriate action are critical to the success of the prevention program (Gilchrist). A context-sensitive rationale for the prevention program must be developed. The program must focus on the dynamic interaction between the student and the environment (Clement, 1994). Such an interaction is crucial to developing and maintaining the behaviours that enhance health and reduce drug use. The overall goal is to have a social environment that supports and sustains individual behaviour change (Clement).

There is limited literature on what universities do to counteract the problem of substance use and abuse amongst its students and hence some of the material to be discussed and reviewed is located in the school environment as that is what has arose as prevalent in the literature.

Education and skills development as prevention

Since the early 1980's American universities and colleges have offered a variety of substance-use education programs with the intention of combating the pervasive use and abuse of substances among students and to address the needs of those with potential or actual substance use patterns (Keller, Bennett, McCrady, Paulus & Frankenstein, 1994).

Berkowitz and Perkins (1986, as cited in Keller et al., 1994) reported that, by the early 1980's, 88% of a representative sample of American universities and colleges offered some form of an alcohol prevention program. Many alcohol education programs have been developed at universities in response to needs of university students for more

and enhanced information about alcohol (Burns & Consolvo, 1992). Alcohol use prevention and treatment interventions and programs exist on many campuses, but few have been evaluated (US Department of Health and Human Services, 2000). Evaluating these programs is a major component of increasing the effectiveness and usage of university based alcohol programs. The most recent developments in prevention theory and program development involve recognition of the critical importance of the environment in shaping and maintaining individuals' behaviour (Gilchrist, 1994). These interventions have multiple components and are designed to address individuals' and the policies, practices and social norms that affect them on campus (Gilchrist).

Educating young people about alcohol and other drugs and the risks associated with their use has been a principal component of most prevention initiatives (Alcohol and Drug Prevention, 1999). The increased awareness of alcohol use as a problem for university and college students has led professionals at institutions of higher learning to respond to this problem most times through the development of alcohol education programs (Burns & Consolvo, 1992). However, education is not enough (Wechsler & Weitzman, 1996; Wechsler et al., 2000). Even though education is needed, by itself it will not solve the problem of substance use among university students (Wechsler et al.). Prevention programmes have also focused on helping youths develop life skills to help them avoid problems associated with substance use (Alcohol and Drug Prevention, 1999). Lowe (2001) purports that strictly educational programmes will have negligible effects on the behaviour of young people and therefore suggests other types of attitudinal and skills-based interventions that can produce immediate reductions in the drinking behaviour of students.

A study that focused on the influence of substance use education on undergraduate students' knowledge, attitudes and behaviours compared five-week psycho educational modules on substance use with control group modules in order to determine whether the psycho educational module would influence the students' knowledge, attitudes and behaviours regarding substance use (Robinson, Roth, Gloria, Keim & Sattler, 2001). The study found that the only major difference between the two groups was that the students in the psycho educational modules knew considerably more than the control group students about substance use. The study failed to impact student attitudes and behaviours regarding substance use (Robinson et al., 2001). This suggests that education may be insufficient on its own and that university substance use initiatives need to include other

forms of prevention i.e. skills development training in order to translate knowledge into behaviours based on the premise that attitudes and behaviours will eventually be positively changed (Robinson et al.).

Some university campuses sponsor alcohol awareness events and classroom lectures and disseminate information about alcohol and drug use (Harvard School of Public Health, 2000; Holmes, 1998; Massachusetts Department of Public Health, 2002; MIT News, 2002; Reisberg Washington, 1998; Wechsler et al., 2004). Although such education initiatives raise awareness of issues surrounding alcohol use (Flynn & Brown, 1991, as cited in US Department of Health and Human Services, 2000), these programs appear to have little effect on drinking and the rates of alcohol problems (Gonzalez, 1991, as cited in US Department of Health and Human Services, 2000).

Behavioural and attitudinal interventions as prevention

Behavioural interventions have been more successful than education in reducing students' alcohol use (US Department of Health and Human Services, 2000). Although attitudinal and behavioural change is complex, university personnel who develop prevention programs and policies should do preliminary research on attitude development and change prior to implementing policies and interventions (US Department of Health and Human Services). This research might provide crucial information to help university personnel understand how students' attitudes affect their patterns of substance use and vice versa (Slappy, 1985, as cited in Scott & Ambroson, 1994). This could only increase the likelihood that successful, meaningful interventions are employed. Developing campus based interventions and policies on alcohol and other drugs without a thorough examination of the students' attitudes and use patterns (prevalence) and a sound theoretical knowledge and understanding of the change process may simply result in intervention and policy failure and an enormous waste of human and financial resources (Scott & Ambroson).

Programs aimed at students' heavy drinking should target freshman at entry or possibly even earlier (Kuo et al., 2002). Since students who live with their parents are less likely to engage in heavy drinking, parents may play a potentially important role in prevention efforts (Kuo et al.).

Factors affecting treatment seeking

Although a large amount of studies have examined university programs aimed at curtailing students drinking to reduce alcohol associated problems, such as comprehensive alcohol education, only a few of these studies have provided insights regarding treatment seeking among university students (Yu, Evans, Perfetti, 2003). Research on treatment seeking may be extremely important for those students who have already developed alcohol addictions and may need help for their problems. Yu et al. examined students' attitudes towards seeking alcoholism treatment in relation to their alcohol education background. They also examined a number of interrelated conditions that may affect students' attitudes toward seeking alcoholism treatment.

The findings supported the alcohol consumption and problem hypotheses, in which the researchers predicted that the students' alcohol environment increases their alcohol consumption and alcohol problems but that alcohol education decreases them (Yu et al., 2003). The results showed that (a) students' alcohol environments influence their levels of drinking (b) students with friends who drink large quantities of alcohol showed to be heavy drinkers themselves and (c) those heavy drinkers showed to experience problems as a result of their heavy drinking (Yu et al.). Other findings showed that alcohol education had little or no effect in decreasing students alcohol consumption or alcohol problems (Yu et al.). With regards to treatment seeking the findings indicated that alcohol education increased the possibility that students will seek out treatment but alcohol problems tended to decrease such a possibility (Yu et al.).

The authors concluded that students with severe alcohol problems are more likely to recognise that they may have alcohol-related problems but less likely to be willing to seek help (Yu et al., 2003). Alcohol education does increase students' positive attitudes toward seeking treatment when they are in need (Yu et al.). This research is encouraging because it suggests that alcohol education delivered in a variety of forms may potentially assist students in seeking treatment for their alcohol problems (Yu et al.).

Although traditional alcohol education programs have been criticised in the past as being ineffective because they seemingly do not reduce the drinking or alcohol problems of students, these findings suggest that although alcohol education may not exert an immediate effect on students' drinking habits, it does appear to increase students' positive

attitudes toward treatment, which may certainly help to reduce their heavy drinking and alcohol problems in the long term (Yu et al., 2003).

Prevention of binge drinking

In 1999 the Harvard School of Public Health College Alcohol Study surveyed 734 US college administrators to learn what universities were doing to prevent binge-drinking on their campuses (Wechsler, Kelley, Weitzman, Giovanni & Seibring, 2000). Results indicated that colleges across America were engaged in a wide variety of efforts designed to prevent binge drinking. Prevention practices were pervasive in the areas of general education about alcohol, use of policy controls to limit access to alcohol, restricting alcohol advertising at sporting events, and allocation of living space to alcohol-free dormitories (Wechsler, et al., 2000).

Programming was less prevalent for more targeted alcohol education, outreach and restrictions on alcohol advertising in the university campus media (Wechsler et al., 2000). Most of the universities surveyed reported having a campus alcohol specialist; with many having task forces and only half performing in-house data collection. Program evaluations, community agreements and neighbourhood exchanges were less common (Wechsler et al.). Prevention practices varied with university characteristics and the administrators' perceptions of the gravity of alcohol problems (Wechsler et al.). This study indicated that universities are involved with prevention initiative aimed at creating awareness, yet none of these colleges reported offering help such as counselling or referral sources to students who indeed have a problem with alcohol (Wechsler et al.).

A survey concerning the types of programs and policies that university administrators used in response to students' heavy drinking was administered to 747 university administrators and findings indicated that colleges and universities were continuing their efforts to respond to heavy student alcohol use by a variety of prevention measures (Wechsler Seibring, Liu & Ahl, 2004). Most respondents considered alcohol use on their campus as a problem. However, fewer respondents in 2002 than in 1999 considered alcohol to be a serious problem, but also significantly fewer considered alcohol use to be a minor problem (Wechsler et al., 2004).

All the universities surveyed were doing something to respond to the problem of binge drinking and alcohol on their campuses (Wechsler et al., 2004). The most popular

action included providing counselling and treatment services for students who already had abuse problems (Wechsler et al.). This result differs from the 1999 study, whereby in 1999 counselling was not mentioned as a preventative initiative. Other popular interventions included (a) conducting alcohol education targeted at freshmen, (b) providing alcohol-free dorms, (c) employing a substance abuse official, (d) restricting use of alcohol at home athletic events, (e) conducting alcohol education targeted towards fraternity members, sorority members or athletes and (f) a task force to deal with substance use issues (Wechsler et al.). This study shows that there has been a marked improvement in the services offered to students as well as in the preventative initiatives undertaken by university administrators (Wechsler et al.).

The future of substance use and abuse prevention

Substance use is not a unitary concept that gives rise to a single, once-and-for-all final solution (Cummings, 1997). Rather, substance use is multifaceted and multiply determined (Cummings). In principle therefore, it is open to many divergent solutions rather than to a single convergent solution (Cummings). Substance use is arguably one of the most complex health problems in the world requiring a theory with long-range vision. Many prevention programs yield few noteworthy results, as they are not linked to long range and intermediate goals (Cummings). Besides developing effective prevention initiatives guided by theory it is important to identify strategies that will maximise the transferability to successful components of substance use prevention programs (Cummings). For transferability to be successful the program needs to document how and why it accomplished its long range and intermediate goals. Programs will be adopted if they are articulated at the level of the causal model i.e. why the program works (Cummings).

Moore and Forster (1993) purport the use of a student assistant program (SAP) based on the historical model of employee assistance programs (EAP). The SAP is designed to reduce adolescent substance use. SAP's assist in identifying, assessing, referring and managing cases of substance-using students. They have gained in popularity and are accelerating in response to the growing need to address substance use and abuse among youth with resources from both the university and the community (Moore & Forster; Balgopal & Stollak, 1992). Drawing on the EAP model and its focus on

substance use and abuse problems in the world of work, the SAP addresses adolescent problem denial and resistance to treatment. The SAP also links the substance-using student with an enlarged base of referral and community services (Moore & Foster).

Brief motivational (empowerment) interventions have in recent times emerged as a promising method to alter health-damaging behaviours (Lowe, 1999; Cummings, 1997). In short, motivational interventions are brief programmes that combine personalised feedback about the effects of the person's health-damaging behaviour with an empathic, therapeutic style on the part of the intervener (Lowe).

Although solutions to substance use and abuse problems on college and university campuses are not always readily forthcoming, great strides have been made in constructing methodologies for identifying problems as they currently exist (Presley & Meilman, 1994). Examples of these methodologies include the CORE alcohol and drug survey (Presley & Meilman) as well as the Youth Survey Questionnaire developed by Smart (1980) under the auspices of the World Health Organisation. Accurate information is the foundation for understanding the issues and for measuring the effects of interventions and prevention programs (Presley & Meilman).

The developmental diversity of university students and their differing states of maturity means that their beliefs and perceptions are diverse, fluid and subject to great influence and change (Scott & Ambroson, 1994). The imperative remains for university health personnel to lead the way in creating safe environments in which students view health-enhancing behaviours as the norm rather than the exception (Presley & Meilman, 1994). University health personnel need to understand why students make unhealthy choices about alcohol and other drugs. Consequently health personnel must view the problem of substance use from a bio psychosocial perspective, a portion of which lies in the attitudes that accompany and are precursors to abusive behaviours (Scott & Ambroson).

The university alcohol and other drug prevention field is currently in a position to make major advances in the areas of assessment, research and evaluation (Berkowitz, 1994). The right questions need to be asked and researched such as what should we prevent? Is it necessary to prevent all drug use, even first time curiosity-seeking or recreational use or should universities seek only to prevent heavy or daily use? Should administrators only limit themselves to preventing harmful use i.e. use which results in some kind of social or health problem? (Smart et al., 1990). For Charney (1994) the real

question around prevention and intervention is that of responsibility. Who is responsible for the current situation on our campuses, for solving the problems and for changing both the behaviour and the environment? Student health as the university health care providers should take a leading role in assuming leadership in solving the problems of substance use on college campuses (Charney).

Clearly the use of epidemiological and etiological research, guiding program development by theory, ensuring dissemination, outlining medium and long term goals and including both primary and secondary preventative initiatives in ones program would allow universities to create substance use prevention programs that target students, to take into account the environment in which the program is located, to provide help to students who already have substance use problems, and to prevent further students from abusing substances (Berkowitz, 1994; Smart et al., 1990).

Although much is known about university students' alcohol and other drug use and abuse patterns, the brief overview of the available literature suggests that there are several gaps where new information is needed (Berkowitz, 1994). These gaps include a lack of information on ethnic minorities, non-traditional students and high-risk groups; opposing definitions of abuse; and a lack of theoretical sophistication in models of abuse and in the development of appropriate questionnaires and methods of data analysis to test them (Berkowitz). Despite the seriousness of problems arising from alcohol and other drug use and abuse, many universities do not have a detailed, comprehensive picture of these problems. University strategies require information on drug-specific patterns of use, trends in those patterns as well as knowledge of the specific characteristics of the substance users in order to identify the high-risk groups (Smart & Sloboda, 2000). This research hopes to provide this information for UCT.

This chapter has provided a thorough outline of the literature concerning substance use amongst students. An international perspective on substance use at universities not in the United States of America and universities in America was discussed, highlighting the concept of binge drinking. Subsequently a local perspective on substance use at South African universities provided a comprehensive picture on the state of substance use amongst South African university students and substance use research at South African universities. Information and literature on policy, prevention and intervention for substance use amongst students was outlined. The following chapter will outline and discuss the methodology employed by the researcher.

CHAPTER 2
RESEARCH METHODOLOGY

This chapter outlines the methodology employed by the researcher by discussing the design of the research, the sample, the time dimension, the data collection procedure and how the data obtained was analysed. The chapter concludes with an examination of the ethical considerations in this research and possible limitations to the research.

RESEARCH DESIGN

A research design is the strategic framework of a research project that links research questions to the execution and implementation of the research (Durrheim, 1999; Oppenheim, 1992; Saunders, Lewis & Thornhill, 2003). It is the blueprint/plan of how one intends to conduct ones research (Babbie & Mouton, 2001). A research design specifies the logic behind a research project, ensures that the study is relevant to the problem and that the study fulfils a particular purpose (Oppenheim). A design is away of arranging the environment in which a research project takes place (Fink, 1995). The environment consists of the individuals, places, activities or objects that are to be surveyed (Fink).

Exploratory, descriptive and causal (explanatory) research are the basic types of research designs. The research that this report is based on utilised both exploratory and descriptive research designs. The current research is known as a prevalence study. In a prevalence study it is appropriate to use exploratory and descriptive studies as they have been proven to be useful techniques when little is known about the problem to be researched and when one intends to obtain an overall depiction of certain characteristics of a sample. Exploratory research is appropriate to any problem about which little is known and can become the foundation for a good study (Churchill, 1995). In a descriptive study, no attempt is made to change behaviour or conditions and you measure things as they are (Hopkins, 2000). Descriptive research is typically concerned with determining the frequency (prevalence) with which something occurs (Churchill, 1995). Exploratory research was used in the form of a literature search and descriptive research was used in

the form of a survey questionnaire. Exploratory research places a major emphasis on the discovery of ideas and insights, while descriptive research is typically concerned with determining the frequency with which something occurs or the relationship between two variables (Churchill, 1995).

Exploratory Research: Literature Search

Exploratory research is used for a number of purposes including establishing priorities for further research and increasing the analyst's familiarity with the problem (Churchill, 1995). Exploratory studies are useful for clarifying ones understanding of concepts related to the research (Babbie & Mouton, 2001; Churchill, 1995; Saunders et al., 2003). There are three main ways of collecting exploratory research, a search of the literature, talking to experts in the field and conducting focus groups (Babbie & Mouton, 2001; Saunders et al.). In this study a literature search was used in order to generate information that would help shape the direction, design and operation of the main study.

In general, exploratory research is appropriate to any problem about which little is known and is quite useful for becoming familiar with a phenomenon that then provides the foundation for a good study (Churchill, 1995). The research technique that was used in the exploratory phase of the research that this report is based on was that of a literature search (Babbie & Mouton, 2001; Backstrom & Hursh-Cesar, 1981). In a literature search the major emphasis is on the discovery of ideas and tentative explanations of the phenomenon. It is not concerned with demonstrating which explanation is the correct explanation. This is better left to descriptive research such as with a survey questionnaire, which this study used (Churchill; Hart, 1993).

Descriptive Research: Survey Research

Descriptive research encompasses an array of research objectives and is often used for the following purposes (a) to estimate the proportion of people in a specified population who behave in a certain way, (b) to make specific predictions (c) to describe characteristics of a certain group, (d) to describe a particular situation or event, (e) to find out more about a particular phenomenon and (f) to capture it with detailed information

(Churchill, 1995; Wisker, 2001). The researcher observes and then describes his/her observations (Babbie & Mouton, 2001).

There are two types of descriptive research studies, namely the longitudinal study and the cross-sectional study. The research that this report is based on made used of a cross sectional study which relied on a sample of elements from the population of interest that were measured at a single point in time (Churchill, 1995; Fink, 1995).

Descriptive research can be an extension of, or used as a precursor to, a piece of exploratory research (Saunders et al., 2003). In this study, the researcher used descriptive research as an extension of the exploratory research phase of her research. The research technique used in the descriptive phase of the research is that of a survey in the form of a questionnaire. The important point to recognise is that descriptive surveys mainly tell us how many members of a population have a certain opinion or characteristic or how often certain events occur together or are associated with each other (Oppenheim, 1992).

Survey research is a set of orderly procedures specifying what information from who is required and how to obtain the information (Backstrom & Hursh-Cesar, 1981). It is a structured approach to data collection and analysis (De Vaus, 2002). Survey research is a broad area of research that encompasses any type of measurement procedure that involves asking questions of respondents (Trochim, 2000). Survey research is often done when the people from whom information is sought are too many and too dispersed. (Backstrom & Hursh-Cesar). A survey is the scientific study of people and is a research tactic used for collecting information to describe, compare or explain the respondent's personal characteristics and aspects of their knowledge, attitudes and behaviour (Backstrom & Hursh-Cesar; Fink, 1995).

The survey differs from other kinds of research in an important way; the survey can generalise about many people by studying only a few of them (Backstrom & Hursh-Cesar, 1981). The survey is a systematic and impartial way of acquiring information and is thus considered a formal procedure; a way of getting information that is separate from the personality of the researcher (Backstrom & Hursh-Cesar). These are the reasons why the author made use of survey research in the form of a questionnaire in her research.

A descriptive survey's main objective is to describe the chosen sample in terms of simple proportions and percentages of people who respond in this way or that to different questions (Punch, 1998). Surveys are particularly useful in describing the characteristics of a large population (Babbie & Mouton, 2001), Descriptive surveys are usually

concerned with large populations (Oppenheim, 1992), and as the authors research is one of a descriptive nature focusing on a large population i.e. university students, survey research was deemed appropriate for this type of research.

The survey approach is a popular strategy in business and management research (Saunders et al., 2003). It is therefore useful and appropriate for a study in the field of organisational psychology.

Survey research is divided into two broad categories: the questionnaire and the interview (De Vaus, 2002; Huer & Saenz, 2003; Saunders et al., 2003; Trochim, 2000). Questionnaires are usually paper and pencil instruments that the respondent completes, whilst interviews are conducted and recorded by the interviewer based on what the respondent says (Trochim). There are various types of interviews and questionnaires (Backstrom & Hursh-Cesar, 1981; Trochim). It is important to note that survey research itself is neither quantitative nor qualitative, it is the survey methods used to collect data i.e. interviews or questionnaires, direct observations or diaries that determine whether the research is quantitative or qualitative (Goodman, 2003). The types of questions asked also determine the nature of the research as they can provide one with data that is either quantitative or qualitative (Glastonbury & Mackean, 1991).

The research that this report is based on utilised the survey research method of questionnaires and therefore will elaborate more on that category based in the quantitative paradigm. Descriptive research, such as that undertaken using questionnaires of organisational practices, enables one to identify and describe the variability in different phenomena (Saunders et al., 2003) and hence was the main reason behind the author's decision to use survey questionnaires in the descriptive phase of her research.

The next section of this chapter outlines the sample design, which involves discussing the sampling technique, the sampling procedure and the sample itself.

SAMPLE DESIGN

Sampling Technique

The main task in sampling is to choose a group of people who are representative of the total or special population of interest in terms of its chief characteristics (Smart et al, 1980). Sampling the total population of the group of interest avoids certain practical

and logistical problems involved in selecting a sample, such as needing to enumerate the sample and the need to identify persons selected for inclusion in the sample (Smart et al.). However, sampling the whole student population at UCT is beyond the scope of this research and hence the author decided to make use of a sample.

First the sampling population was defined then the sampling technique chosen. The sample population is that of first and fourth year commerce students across commerce degrees at UCT. The sampling technique used is that of purposive sampling. Purposive sampling is a sampling technique that is classified as a type of non-probability sampling (Backstrom & Hursh-Cesar, 1981; De Vaus, 2002; Kalton, 1983; Trochim, 2000; Welman & Kruger, 1999). Non-probability samples are samples that use human judgement in selecting the respondents and have no theoretical basis for estimating population characteristics (Welman & Kruger). The advantages of using non-probability sampling techniques are that they are less complicated and more economical (time and finances) than probability samples (Welman & Kruger).

This study used non-probability sampling because it did not want to rely on chance to find respondents, especially for selecting only a minuscule number from a large population (Backstrom & Hursh-Cesar, 1981). In purposive sampling, the researcher samples with a purpose in mind (Trochim, 2000). The researcher chooses the respondents deliberately, by knowing the type of people that they are or where they are located or on the basis of specific characteristics (Black, 1999; Brewer & Hunter, 1989). In purposive sampling the researcher uses his or her judgement to select cases that will best enable him or her to answer the research question and meet the objectives of the study (Babbie & Mouton, 2001; Saunders et al., 2003).

Purposive sampling can be very useful for situations where you need to reach a targeted sample quickly and where sampling for proportionality is not the primary concern (Saunders et al., 2003; Trochim, 2000). Purposive Samples are not selected randomly and hence whilst not always ensuring representativeness, this selection method can provide some useful information (De Vaus, 2002).

With a purposive sample you are likely to get the opinions of your target population, in this case first and fourth year commerce students at the University of Cape Town, but are also likely to overweight subgroups in your population that are more readily accessible (Trochim, 2000). The type of purposive sampling that is being used in this research is that of typical case sampling. Such a sample provides an illustration of

what is 'typical' to those who will be reading the research report and who may be unfamiliar with the subject matter (Saunders et al., 2003).

Sampling Procedure

The researcher knew whom she wanted to use in her sample and knew where to find them. The researcher made a list of all first year and fourth year commerce subjects across the Bachelor of Commerce and Bachelor of Business Science degrees. This is known as the sampling frame, which is the list(s) or resource(s) that contains the elements of the defined population (first and fourth year commerce students) (Czaja & Blair, 1996).

Once the sampling frame was completed, the researcher approached the relevant lecturers of the listed subjects to gain permission to use lecture time to administer the questionnaire. The author confirmed to all students that the questionnaire was both voluntary and confidential. One very efficient method of sampling students is to sample them in class (Czaja & Blair, 1996). This method takes advantage of natural clusters and captive audiences.

The major obstacle to this method is obtaining the permission of the lecturers of the chosen classes (Czaja& Blair). Those lecturers who did not want to give time during lectures were not forced too and other arrangements were made to sample those students, like placing the questionnaires in their student inboxes or using tutorial time. This form of sampling can definitely be termed purposive sampling as the researcher sampled with a purpose in mind.

Sample

There are 2008 students registered for first year and fourth year commerce degrees. The researcher endeavoured to sample as many of those students as possible. The following analysis denotes the amount of students registered for first and fourth year commerce degrees and the percentage of those students who were sampled.

BBUSSCI	REGISTERED	SAMPLED	% SAMPLED
1st Year	690	232	34%
4th Year (Honours)	522	192	37%
Total	**1212**	**424**	**35%**

BCOM	REGISTERED	SAMPLED	% SAMPLED
1st Year	553	172	31%
4th Year (Honours)	243	60	25%
Total	**796**	**232**	**29%**

In total 33% of first year commerce students were sampled and 33% of fourth year commerce students were sampled. Since the researcher was not in control of how many students completed the questionnaire and since the response rate was not 100%, the sample size is that of 381 men, 288 women and 5 questionnaires with data missing totalling a sample size of 674 students. Overall 33% of registered students for first and fourth year commerce degrees were sampled.

DEGREE YEAR	REGISTERED	SAMPLED	% SAMPLED
1st Year	1243	410	33%
4th Year (Honours)	765	259	34%
Total	**2008**	**669**	**33%**

The sample has the following characteristics:

- Men and women who are commerce students at UCT
- Of any race and age
- Are either in their first or fourth year (honours year) of their degree

GENDER	NO. OF RESPONDENTS	PERCENT
Male	381	56.52819%
Female	288	47.72997%
Missing Data	5	0.74184
Total	**674**	**100%**

DEGREE YEAR	NO. OF RESPONDENTS	PERCENT
1st Year	410	60.83086%
4th Year (Honours)	259	38.42730%
Missing Data	5	0.74184
Total	**674**	**100%**

TIME DIMENSION

This study is a cross sectional study as it is taking a snapshot of the commerce student's substance use habits and feelings towards substance use at one moment in time (Saunders et al., 2003). Cross-sectional research takes place at one point in time

(Trochim, 2005) and entails the measurement of all variables for all cases within a restricted time span so that the measurements may be viewed at the same time (King, 2001). Research that is of an exploratory and descriptive nature is often cross-sectional (Babbie & Mouton, 2001). Cross sectional studies frequently make use of the survey strategy (Robson, 2002 as cited in Saunders et al.). This study used a survey questionnaire to assess the prevalence of substance use amongst first and fourth year/honours year commerce students at a given time. The researchers conclusions will be based on observations made at one point in time and not over time.

The next section of this chapter outlines the data collection procedure.

DATA COLLECTION

A literature search was used to keep on top of current situations and developments (Churchill, 1995). The literature search guided the design of the research and provided a clear understanding of the objectives of the study (Churchill). A questionnaire was then designed which used the information from the literature search to guide its creation.

In the quantitative paradigm, the instrument for data collection is a pre-determined and finely tuned technological tool that does not allow for much flexibility, imaginative input and reflexivity (Brannen, 1992). The survey questionnaire is the centrepiece of a quantitative design. The researcher used surveys in the form of questionnaires in the descriptive phase of her research (Punch, 1998).

Questionnaires are highly structured and inflexible data collection instruments whereby each respondent is asked the same set of questions (De Vaus, 1995). Questionnaires are usually instruments that are self-administered (Oppenheim, 1992). Self-administered questionnaires are frequently used to ask structured and close-ended questions with the questions being determined beforehand and are often answered using some sort of scale (Huer & Saenz, 2003). Self-administered questionnaires can take on many forms including the mail questionnaire; the group administered questionnaire and the household drop-off questionnaire (Oppenheim; Trochim, 2000).

The author of this report distributed questionnaires to students during lectures and asked them to complete the questionnaires and return them to her once completed. This form of survey questionnaire is known as the unsupervised self-administered

questionnaire (Bourque & Fielder, 1995; Saunders et al., 2003). This form of questionnaire was useful for the researcher as it enabled the researcher to distribute a large amount of questionnaires easily and quickly without having to supervise the completion of each. This allowed for the possibility of a large sample.

Ones choice of questionnaire will be influenced by a variety of factors related to ones research and objectives and in particular the following factors; (a) characteristics of the respondents, (b) importance of reaching a particular person as a respondent, (c) importance of respondent's answers not being contaminated or distorted, (d) size of sample, (e) type of question you need to ask to collect your data and (f) number of questions you need to ask to collect ones data (Saunders et al., 2003). The choice of questionnaire will affect the number of people who respond, with interviewer-administered questionnaires usually having a higher response rate than self-administered questionnaires (Saunders et al.).

Survey questionnaires are used to obtain the following types of information from respondents; biographical particulars, typical behaviour, opinions, beliefs and convictions and attitudes of respondents (Welman & Kruger, 1999; Wisker, 2001). Despite the many benefits of survey questionnaires such as economical feasibility and the amount of data that can be collected, one must be cognisant of the weaknesses associated with survey research which include the possibility of being somewhat artificial and potentially superficial and the fact that it is difficult to gain a full sense of social processes in their natural settings through the use of survey research (Babbie & Mouton, 2001).

The topic under investigation by the author is one of a sensitive nature and for that reason the researcher has immersed herself in the literature surrounding the topic of substance use amongst university students in order to obtain a strong grasp of the pertinent issues that have enabled her to ask relevant questions in a culturally sensitive manner (Huer & Saenz, 2003).

The first part of the questionnaire is a replica of the WHO questionnaire developed to assess student drug abuse created by Smart et al., (1980). This questionnaire was designed by a team of experts from various parts of the world who came together to decide on the core data items for a student drug-use questionnaire. The object was for these experts to develop a broadly acceptable methodology that would be practical for use in various age groups and socio-cultural settings (Smart et al.). The questionnaire was tested in seven countries in a variety of languages and settings in order to determine its

general effectiveness, reliability and validity and based on this experience the questionnaire was finalized (Smart et al.). The researchers provided evidence on the reliability and validity of the questionnaire, which they hoped would generate some confidence in the use of this questionnaire in international studies (Smart et al.). The questionnaire was found to have test-retest reliability in three countries (centres) and it gave generally valid results in one centre where special validity checks were also used. The test-retest reliability studies suggested generally high reliability of answers to drug-use questions (Smart et al.). The authors further found that the questionnaire worked well with student groups and suggested that the final revised questionnaire (which was used in the current study) could be used in research that involved the assessment of the prevalence of drug use in the populations studied at a particular point in time (Smart et al.).

The first aim of the project was to develop instruments and methods to meet the priority data-collecting needs for developing countries with serious problems of drug use and abuse (Smart et al., 1980). For this reason the author felt that this questionnaire would be useful in studying substance use among students in South Africa, as South Africa is a developing country. This questionnaire has been used in other research on student substance use that was discussed in the literature review (Peltzer & Phaswana, 1999). Developing countries, like South Africa, cover approximately two-thirds of the world's area and have approximately three-quarters of the world's population. These countries have large populations, but considerably few resources and hence many are in critical need of substance abuse prevention and treatment policies and programmes based on epidemiological data that this research is collecting (Saxena & Donoghoe, 2000).

The researcher developed the second part of the questionnaire, which focused on UCT and its rules and policies, after conducting a thorough literature search and after consulting other alcohol and drug surveys.

Once the questionnaire was designed, a copy was sent to the Dean of Students, the Dean of Commerce, The Commerce Student Council and the Commerce Faculty Ethics Committee in order for them to read it and accept it. Questionnaires were then distributed to students in lectures, tutorials and through student inboxes. These questionnaires contained questions dealing with fact and also centered on demographic characteristics, awareness, perceptions, thoughts, beliefs, feelings, attitudes and behaviours (Kidder,

1981). All the questions related to the issue of substance use and abuse amongst university students. An example of the questionnaire is included in Appendix C.

Questionnaires are an effective research technique to use as they are simple to administer and responses are easy to tabulate and analyse (Gillham, 2000; Oppenheim, 1992; Saunders et al., 2003). Survey questionnaires of student alcohol and drug use and abuse allow researchers to assess usage patterns and thus serve an important role within university drug prevention programmes (Berkowitz, 1994). Questionnaires are easy to complete and can be completed as quickly or as slowly as the respondent desires (Berdie & Anderson, 1974; Gillham). Questionnaires are less expensive than other data gathering techniques because they are handed to large numbers of respondents concurrently (Berdie & Anderson; Gillham; Glastonbury & MacKean, 1991; Oppenheim; Saunders et al.; Smart et al., 1980). Questionnaires avoid potential interviewer bias, assure greater anonymity for respondents and create less pressure for immediate response (Oppenheim; Gillham).

The possibility of a low response rate and the resulting biases limit the effectiveness of the questionnaire (Berdie & Anderson, 1974; Gillham, 2000; Glastonbury & MacKean, 1991; Oppenheim, 1992; Welman & Kruger, 1999). Intrusive and sensitive questions can frustrate respondents and produce non-response (De Vaus, 2002). Questionnaires allow no opportunity for clarification of misunderstandings (Gillham; Oppenhein). The researcher has no control over the order in which questions are answered and there is no check on incomplete questionnaires or knowing if the right person responded or even if that person consulted with others whilst filling in the questionnaire causing it to be contaminated (Glastonbury & MacKean; Oppenheim; Saunders et al., 2003).

The questionnaires were self-administered and contained mainly fixed alternative questions. The anonymous self-administered questionnaire is popular because of the following reasons: (a) it is inexpensive (b) it requires no interviewers, since respondents complete the questionnaire themselves and hence avoids interviewer bias (c) the data that it yields may be processed relatively inexpensively and efficiently because the questions asked are usually straightforward and their answers easily interpreted and (d) provides the possibility of anonymity and privacy to encourage candid responses on sensitive issues (Babbie & Mouton, 2001; Johnston, 2000; Smart et al., 1980).

The self-administered questionnaire is the best way to obtain information on private behaviour as the information may be obtained anonymously (Smart et al., 1980). The self-administered questionnaire makes a large sample feasible, as a large number of cases is very important for both descriptive and explanatory analyses (Babbie & Mouton, 2001). Self-administered questionnaires are only appropriate when the population under study is adequately literate (Babbie & Mouton). In the case of university students, self-administered questionnaires were deemed appropriate as one makes a general assumption that university students are more than adequately literate.

The questionnaire contained questions that distinguished the different classes of substances for purposes of separate measurement and questions that focused on prevalence periods for use for each of the classes of substances. These are considered core measures, meaning that it is recommended that any research study dealing with the prevalence and incidence of substance use contain these measures (Johnston, 2000).

The questionnaires made use of the following fixed alternative questions: multichotomous questions, dichotomous questions, and checklists. These types were used in order to obtain data that is easy to compare and analyse (Oppenheim, 1992). Fixed alternative questions allow for greater uniformity among respondents along the specific dimensions the research is interested in (Phillips, 1971). The response options offered to respondents can affect the questionnaire results because confusing options lead to unreliable results and low response rates (Babbie & Mouton, 2001; Berdie & Anderson, 1974).

The closed-ended questions in the questionnaire were used for statistical analysis and provided quantitative data. Quantitative data is data that can be converted into discrete units that can be compared to other units by using statistical methods of analysis (Maykut & Morehouse, 1994). The purpose of quantitative data is to establish general trends in opinions, values and perceptions (Jones, 1988). The aim of the data is generalizability (Jones, 1988). Quantitative data looks for and isolates relationships that are found in an organisational system (Jones).

Various viewpoints allow for greater accuracy (Jick, 1979). By making use of different approaches, the researcher may obtain different sets of data that will ultimately help the researcher in his/her understanding of the phenomenon studied (Burgess, 1993). By using multiple methods, deficiencies that come from one method can be overcome (Burgess).

In this study, the researcher, found it more practical to collect information on nonmedical substance use than on abuse and dependence (Smart et al., 1980). If only substance abuse and dependence had been measured in this research, a large population of students who are occasional substance users would have had to be excluded. This group of students who are occasional substance users, and who would clearly not be considered as being drug dependent and might not be drug abusers, is of central concern in epidemiological surveys of substance use (Smart et al.)

Special population studies focus on one part of the population and may not be representative. Special population surveys have the following advantages: (a) targeted coverage, (b) provides information on users of particular drugs, and (c) provides information on hidden populations. Some limitations of special population surveys include lack of validity and representativeness, and the sampling may be difficult (Smart & Sloboda, 2000). In this research the validity of the survey questionnaire has already been established and the sampling was done using purposive sampling, which provided an easy method for the researcher to gain information from the target population.

DATA ANALYSIS

All the questionnaires have been checked for inaccurate, illegible, incomplete or inconsistent responses. Questionnaires containing only one or two instances of non-responses were retained. All the questionnaires were treated in the same manner.

In designing a study on alcohol and other substance use, researchers need to carefully define the study objectives and identify appropriate methods of data analysis in order to achieve these objectives. In many cases simple analyses such as those found in descriptive statistics i.e. overall percentages of substance users and cross-tabulations by age, sex and other demographic characteristics will be sufficient (Smart & Sloboda, 2000). Alcohol and other substances surveys are most frequently conducted to provide descriptive data regarding patterns and prevalence of student use (Berkowitz, 1994). This research is hoping to provide such information in order to incorporate the data into educational programmes, which provide direct, ongoing feedback to students about their own behaviour (Berkowitz). Information on prevalence rates can be integrated into symposia, classes and media presentations and can be used to create outreach programs tailored to the specific needs and use patterns of students at UCT (Berkowitz).

Coding is the technical procedure by which data are categorised and ordered (De Vaus, 2002). It involves assigning numbers to each of the answers so that they may be analysed, most times by computer (Churchill, 1995). Coding for the fixed alternative questions in the questionnaire was conducted after the questionnaires were returned. Numeric codes were used, as computers can only manipulate numbers and not letters. Classes such as male and female were coded with a 1 and 2.

The specific techniques that were used for this research were based on whether it was appropriate or not for the researcher to conduct univariate or multivariate analyses. It was appropriate for the researcher to conduct univariate analyses as the research question was of a univariate nature. Univariate analysis involves the analysis of a single variable (De Vaus, 2002). With univariate analysis it is appropriate for the researcher to conduct tests that can be classified as basic statistics or descriptive statistics, which provide a method of reducing large data matrices to manageable summaries to permit easy understanding and interpretation (Babbie & Mouton, 2001; Babbje, 1973; Gillham, 2000).

Descriptive statistics is concerned with the description and or summarisation of the data obtained for a group of individuals (De Vaus, 2002; Huysamen, 1998). Descriptive statistics can summarise single variables and also the associations among variables (Babbje). Descriptive statistics is the most productive type of statistics in understanding a phenomenon as it is used to discover the patterns and processes in a sample (De Vaus). Once one has used descriptive statistics (i.e. discovered the patterns and processes in the sample) one can then use inferential statistics to see the probable match between the patterns in the sample and those in the population (De Vaus).

There are three broad ways in which descriptive analysis is conducted and presented: tabular, graphical and statistical. The analysis of the complete database used a range of techniques that fit into the three categories mentioned.

Tabular analysis involves presenting the results of the analysis in tables such as:

- Frequency Tables/Distribution: A table of the outcomes of a variable and the number of times each outcome is observed in the sample (Bohrnstedt & Knoke, 1988; Howell, 1999). The table indicates the number of respondents who have replied to each question (Hart, 1993).

- Cross tabulations: Table that displays the joint frequency distribution of two discrete variables. The table has rows and columns (Bohrnstedt & Knoke, 1988). Way of displaying data for detecting an association between two variables (De Vaus, 2002).

Graphical analysis involves presenting the results of analysis in the form of graph. For simple analysis a graph might display patterns more readily than a table does (De Vaus, 2002). Examples of graphs used are:

- Histograms: Graphs or diagrams that are used for discrete variables in which the numbers of percentages of cases in each outcome are displayed (Bohrnstedt & Knoke, 1988).
- Pie Charts: Circular graphs, which are useful when presenting nominal data. Sections of the chart represent percentages of a whole, the full circle encompassing 100% (Black, 1999). A very good way of presenting percentages and comparing different groups (Gillham, 2000).

Statistical analysis provides summary measures of information contained in a set of cases. These descriptive statistics are often a single number and do not contain as much information as a table or graph, but do provide an easily understood snapshot of a set of cases (De Vaus, 2002). Techniques used include:

- Frequency Counts: Computation of how many people fit into a category (Fink, 1995).
- Percentages: A number that is created by multiplying a proportion (a number formed by dividing the cases that are associated with an outcome of a variable by the total number of cases) by 100. Percentages are usually displayed on a percentage frequency distribution (Bohrnstedt & Knoke, 1988).
- Central tendency: a manner of presenting data in the form of summary averages (Babbie & Mouton, 2001). The mode is the form of central tendency used by the researcher as it indicates the most frequent attributes of the sample and is the most apt measure of central tendency when data is nominal (De Vaus, 2002). The mean was used to obtain an average age of first use of each drug as it can only be used with numerical data (Huysamen, 1998).

Once the descriptive statistics were completed and the researcher had examined the ways in which cases distributed across the categories of a variable, the researcher wanted to see whether the pattern in the sample was likely to reflect the pattern in the population from which the sample was drawn and hence chose to conduct inferential analyses of the data. There are two chief methods of doing inferential statistics, namely: significance testing and making interval estimates (De Vaus, 2002). The statistical tests that were chosen were based on the fact that the research question was of a univariate nature, the level of measurement of the data was nominal, and the data only contained one sample (Churchill, 1995). The test most suited for these conditions is a non-parametric statistical test called Chi-Squared (Churchill).

One sample Chi-squared test: a type of correlation coefficient or measure of association used with nominal data (De Vaus, 2002). This type of test is also known as a significance test (De Vaus). There are two types of chi-squared tests that can be used. The one that the author used is that of the Chi-squared test of independence or contingency. This test is used when one wants to determine whether two variables are associated (contingent upon one another) or are independent of one another (Microbiology at Leicester, 2004).

The chi-squared independence test is used to determine whether an association exists between two variables of a specific population (Archambault, 2000; Weiss, 2002). The null hypothesis is that there is no association between the two variables, whilst the alternative hypothesis is that they are associated, but not causally related (Weiss). The descriptive statistics will be used to help analyse the chi-squared statistics by showing which categories of the variables tested are associated.

ETHICAL CONSIDERATIONS

The ethical considerations of anonymity and informed consent were upheld throughout the research. The respondents were informed of the purpose of the questionnaire, the qualifications of the researcher and the fact that it was endorsed by the Dean of Students and the commerce faculty in a letter attached to the front page of the questionnaire, or by the researcher in person. The respondents were also informed that the commerce faculty ethics committee approved the research. The respondents were also made aware that the questionnaire was completely voluntary and entirely anonymous.

Asking the respondents to place their completed questionnaires into non-descript, plain white envelopes and then to seal the envelopes ensured anonymity.

LIMITATIONS

Survey Research

Surveys

Like all data gathering techniques, survey research has its limitations. Survey data may be superficial as it is not capable of digging deeply into people's psyches and looking for fundamental explanations of their unique behaviour (Oppenheim, 1992). Survey research is also too restricted as it relies on highly structured questionnaires, which are unavoidably limited as they reduce interesting questions to totally incomprehensible numbers (Oppenheim). This could be a possible limitation to the research as the research was unable to fully grasp a clear understanding of the student's experiences of substance use and perceptions of UCT's role in managing substance use on its campuses.

Despite these possible limitations, the current research focused on prevalence and did not focus on digging deeply into the respondent's psyches thereby looking for deep-seated and underlying rationalizations for their behaviours. The highly structured questionnaire allowed the researcher to perform statistical analyses that provided information that lent itself to the study of prevalence by obtaining an overall picture of the substance use habits of the respondents.

Questionnaire and Questions

A possible limitation of the usage of questionnaires is that it does not allow the respondents the opportunity to clarify any misunderstandings that they might encounter (Oppenheim, 1992). The researcher was present at all questionnaire administration sessions and was able to clarify any misunderstandings the respondents had.

A potential limitation is that by using questionnaires, the researcher had no control over the order in which the questions were answered and had no check on incomplete questionnaires or the passing on of questionnaires to other people to answer. This could limit the study, as the author does not know if the people who answered the

questionnaires were all first/fourth year students or not and as a result this affects the sample.

The fact that the questionnaire was a self-report questionnaire may have lead to an obstruction of the truth. What the researcher gets is not always the undiluted truth. This could translate into a possible limitation for the research.

Cross Sectional Research on Substance Use and Abuse

The usage of illicit substances is a stage, age, and development-dependent phenomenon (Perkoning, Lieb, & Wittchen, 1998). As a result, doing a once off cross-sectional study, in terms of substance use initiation and the progression to regular and heavy use, has the potential limitation of being only a preliminary and introductory report (Perkoning et al.). Significant and important disadvantages of cross-sectional designs for the study of developmental issues include the inability to directly evaluate intra-individual variation and the restriction of inferences to group averages (King, 2001). A cross sectional study does not permit one to extract definite conclusions about substance use and symptom progression into substance disorders (Perkoning, et al.). These processes depend on many factors including, cognitive and behavioural development, life style changes of an individual, the changing patterns in the availability of drugs over time and more general secular trends (Perkoning et al.).

Longitudinal studies assess changes over time by focusing on the same group of respondents for a period (Heffner, 2004). Longitudinal studies are therefore needed in order to examine in more detail the transitions from first use to regular use, to possibly heavy use and finally to the development of abuse and dependence disorders as well as the associated risk factors (Perkoning et al., 1998). This research would involve assessing the changes in the same individuals over time. In order for universities to adequately tackle the issue of substance use and abuse on its campuses longitudinal research into the above mentioned issues must happen. This study did not look at changes over time and only focused on prevalence of substance use and not the transition of use to abuse to dependence and hence a cross-sectional study was appropriate.

Access

The author gained access to all lectures that were relevant to her study. However she had no control over the number of students in the lecture and this caused her to only get access to 33% of registered students in first and fourth year commerce degrees. This provides a limitation for the study, as only a third of total first and fourth year commerce students were sampled.

Another limitation is the fact that the researcher did not sample all commerce students, across all years of their degrees. However, due to time and the immense scope of a project that looked at commerce students across all years of their degrees, the decision was made to focus the study on first and fourth year students to enable comparisons to be made re substance use with new students who have just entered the university system and older students who would be exiting the university system shortly.

General limitations

The research is limiting, as it does not look at quantity of substance use but rather frequency of use in terms of how often one uses a substance not how much of that substance one uses. This limits the study, as it does not indicate whether there is a substance use problem amongst the students sampled, but only the patterns of substance use amongst the students sampled i.e. not how much of a substance they use on each day, but rather how many days on which they use a substance.

Another limitation is the generalisability of the study. The study looked at first and fourth year commerce students and used them as a lens through which substance use in the commerce faculty could be viewed. Not only are the results not completely generalisable across the whole commerce faculty, but also they cannot be generalized across the university or other commerce faculties at other universities.

CHAPTER SUMMATION

This chapter outlined the methodology employed by the author during her research. Exploratory research was used in the form of a literature search and a survey

questionnaire was used in the descriptive phase of the research (Babbie & Mouton, 2001; Saunders et al., 2003). The sample design was discussed in terms of the sampling technique, sampling procedure and actual sample.

The time dimension of this research was discussed, highlighting that the study was of a cross-sectional nature. The data collection procedure was discussed and a thorough review of the main data collection instrument i.e. the survey questionnaire and the paradigm in which survey questionnaires are situated was provided. An outline of the data analysis techniques used in the research was provided, namely: descriptive statistics in the form of pie charts, frequency tables and counts, measures of central tendency, cross tabulations, percentages and histograms and inferential statistics, in the form of chi-squared statistics. Subsequent to that the ethical considerations of the research were outlined followed by pertinent potential limitations to the research.

CHAPTER 3
RESULTS

This chapter presents the results of the research using tables, figures and narratives. The results are grouped together according to the top three substances that arose as most prevalent and then a section on other substances. The three most prevalent drugs are alcohol, tobacco and cannabis. The section on other substances will report on stimulants and MDMA/ecstasy. Extra statistical results, all tabular representations of the chi-squared statistics and descriptive statistics on other drugs researched can be viewed graphically in Appendix B. The statistical program used for all the statistics is that of Statistica 7.

THREE MOST PREVALENT SUBSTANCES OF USE

Lifetime usage pertains to whether the students have ever used or tried the specific substance being discussed. If they said yes to lifetime usage, it meant that at some point in their lives they had tried or used the substance. Past year use of a substance refers to use of that specific substance in the 12 months prior to the study. Past month use of a substance refers to use of that specific substance in the 30 days prior to the study.

Alcohol

Table 1: Modal Responses to Questions on Alcohol Consumption

	Descriptive Statistics		
Variable	Valid N	Mode	Frequency of Mode
Alcohol	674	2 = yes	598
Alcohol 12 months	598	2 = yes	572
Alcohol 30 days	572	2 = yes, on 1-5 days	299

Mean age of respondents first alcohol consumption = 15.05. Valid $n = 445$.

Table 2: Lifetime Alcohol Consumption of Students.

	Frequency table: Have you ever drunk any alcoholic beverage?			
Category	Count	Cumulative Count	%	Cumulative %
No	76	76	11.28	11.28
Yes	598	674	88.72	100.00

Table 3: Differences in Lifetime Alcohol Consumption of Students according to Degree Year.

	Lifetime Alcohol Consumption		
Degree Year	No	Yes	Row Totals
1st year	61	349	410
First Year %	14.88%	85.12%	
% of Total Sample	9.05%	51.78%	60.83%
4th year	15	244	259
Fourth Year %	5.79%	94.21%	
% of Total Sample	2.23%	36.20%	38.43%
No response	0	5	5
No Response %	0.00%	100.00%	
% of Total Sample	0.00%	0.74%	0.74%
Totals	76	598	674
Total Percent	11.28%	88.72%	100.00%

Note. Differences in lifetime alcohol consumption according to degree year are presented as a count and percentage (%) of the degree year sample and the total sample.

Table 4: Differences in Lifetime Alcohol Consumption of Students according to Gender.

	Lifetime Alcohol Consumption		
Gender	No	Yes	Row Totals
Male	36	345	381
Male Usage %	9.45%	90.55%	
Total Sample %	5.34%	51.19%	56.53%
Female	40	248	288
Female Usage %	13.89%	86.11%	
Total Sample %	5.93%	36.80%	42.73%
No Response	0	5	5
No Response %	0.00%	100.00%	
Total Sample %	0.00%	0.74%	0.74%
Totals	76	598	674
Total Percent	11.28%	88.72%	100.00%

Note. Differences in lifetime alcohol consumption according to gender are presented as a count and percentage (%) of the gender sample and the total sample.

Table 5: Past Year Alcohol Consumption of Students.

	Frequency table: Have you drunk any alcoholic beverage in the past 12 months			
Category	Count	Cumulative Count	%	Cumulative %
No	26	26	4.35	4.35
Yes	572	598	95.65	100.00

Note. This table only applies to those who answered yes in table 2

Table 6: Differences in Past Year Alcohol Consumption of Students according to Degree Year.

	Past Year Alcohol Consumption		
Degree Year	No	Yes	Row Totals
1st year	16	333	349
1st Year %	4.58%	95.42%	
% of Total Sample	2.68%	55.69%	58.36%
4th year	10	234	244
4th Year %	4.10%	95.90%	
% of Total Sample	1.67%	39.13%	40.80%
No response	0	5	5
No response %	0.00%	100.00%	
% of Total Sample	0.00%	0.84%	0.84%
Totals	26	572	598
Total Percent	4.35%	95.65%	100.00%

Note. Differences in past year alcohol consumption according to degree year are presented as a count and percentage of the degree year sample and the total sample.

Table 7: Differences in Past Year Alcohol Consumption according to Gender.

	Past Year Alcohol Consumption		
Gender	No	Yes	Row Totals
Male	15	330	345
Male Usage %	4.35%	95.65%	
Total Sample %	2.51%	55.18%	57.69%
Female	11	237	248
Female Usage %	4.44%	95.56%	
Total Sample %	1.84%	39.63%	41.47%
No Response	0	5	5
No Response %	0.00%	100.00%	
Total Sample %	0.00%	0.84%	0.84%
Totals	26	572	598
Total Percent	4.35%	95.65%	100.00%

Note. The differences in past year alcohol consumption according to gender are presented as a count and percentage of the gender sample and the total sample.

Table 8: Past 30 Days Alcohol Consumption of Students.

	Have you drunk any alcoholic beverage during the past 30 days?			
Category	Count	Cumulative Count	%	Cumulative %
No	84	84	14.69	14.69
Yes 1-5	299	383	52.27	66.96
Yes 6-19	145	528	25.35	92.31
Yes 20+	43	571	7.52	99.83
No response	1	572	0.17	100.00

Note. This table only applies to those who answered yes in table 5 above.

Figure 1: Graphical Representation of Past 30 Days Alcohol Consumption of Students.

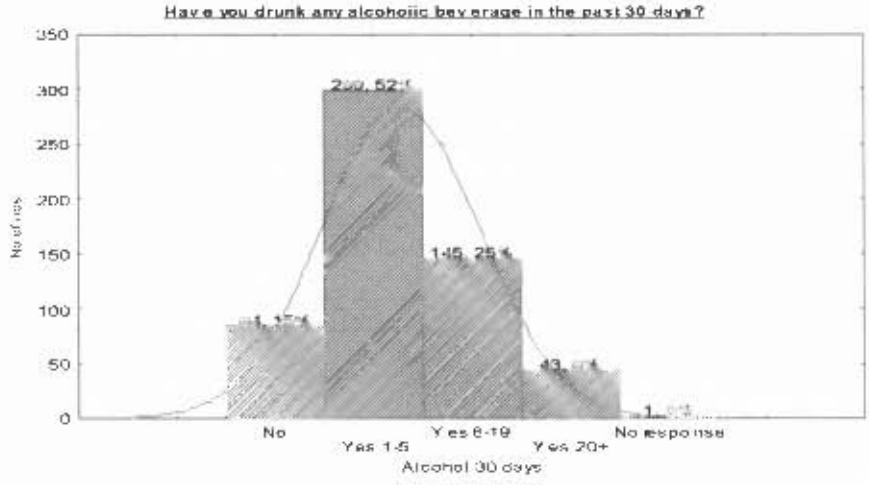


Table 9: Differences in Past 30 Days Alcohol Consumption of Students according to Degree Year.

	Past 30 Days Alcohol Consumption					
Degree Year	No	Yes, on 1-5 days	Yes, on 6-19 days	Yes, on 20+ days	No Response	Row Totals
1st year	64	164	79	27	0	333
1st year %	19.22%	49.25%	23.42%	8.11%	0.00%	
% of Total Sample	11.19%	28.67%	13.64%	4.72%	0.00%	58.22%
4th year	18	134	65	16	1	234
4th Year Percent	7.69%	57.26%	27.78%	6.84%	0.43%	
% of Total Sample	3.15%	23.43%	11.36%	2.80%	0.17%	40.91%
No response	2	1	2	0	0	5
No response %	40.00%	20.00%	40.00%	0.00%	0.00%	
% of Total Sample	0.35%	0.17%	0.35%	0.00%	0.00%	0.87%
Totals	84	299	145	43	1	572
Total Percent	14.69%	52.27%	25.35%	7.52%	0.17%	100.00%

Note. The differences in past 30 days alcohol consumption according to degree year are presented as a count and percentage of the degree year sample and the total sample.

Table 10: Differences in Past 30 Days Alcohol Consumption of Students according to Gender.

Gender	Past 30 Days Alcohol Consumption				
	No	Yes 1-5 Days	Yes 6-19 Days	Yes 20+ Days	Row Totals
Male	44	177	87	22	330
Male Usage %	13.33%	53.64%	26.36%	6.67%	
Total Sample %	7.71%	31.00%	15.24%	3.85%	57.79%
Female	38	120	57	21	236
Female Usage %	16.10%	50.85%	24.15%	8.90%	
Total Sample %	6.65%	21.02%	9.98%	3.68%	41.33%
No Response	2	2	1	0	5
No Response %	40.00%	40.00%	20.00%	0.00%	
Total Sample %	0.35%	0.35%	0.18%	0.00%	0.88%
Totals	84	299	145	43	571
Total Percent	14.71%	52.36%	25.39%	7.53%	100.00%

Note. The differences in past 30 days alcohol consumption according to gender are presented as a count and percentage of the gender sample and the total sample.

The chi-squared statistic for **degree year and alcohol** = 13.73 (df=2), p=.00104. Cramers V =.14.

The chi-squared statistic for **degree and alcohol** = 8.85 (df=3), p=.03130. Cramers V=.12.

The chi-squared statistic for **gender and alcohol** = 3.87 (df=2), p=.14427. Cramers V=.08.

Tobacco

Table 11: Modal Responses to Questions on Tobacco Usage.

Variable	Descriptive Statistics		
	Valid N	Mode	Frequency of Mode
Tobacco	674	2 = Yes	462
Tobacco 12 months	462	2 = Yes	320
Tobacco 30 days	323	2 = Yes	213

Mean age of respondents age first use of tobacco = 15.21. The valid $n = 445$,

Table 12: Lifetime Tobacco Usage of Students.

	Frequency table: Have you ever smoked, chewed, or sniffed any tobacco produc			
Category	Count	Cumulative Count	%	Cumulative %
No	212	212	31.45	31.45
Yes	462	674	68.55	100.00

Table 13: Differences in Lifetime Tobacco Usage of Students according to Degree Year.

	Lifetime Tobacco Usage		
Degree Year	No	Yes	Row Totals
1st year	152	258	410
First Year %	37.07%	62.93%	
% of Total Sample	22.55%	38.28%	60.83%
4th year	59	200	259
Fourth Year %	22.78%	77.22%	
% of Total Sample	8.75%	29.67%	38.43%
No response	1	4	5
No Response %	20.00%	80.00%	
% of Total Sample	0.15%	0.59%	0.74%
Totals	212	462	674
Total Percent	31.45%	68.55%	100.00%

Note. The differences in lifetime tobacco usage according to degree year are presented as a count and percentage of the degree year sample and the total sample.

Table 14: Past Year Tobacco Usage of Students.

	Have you smoked, chewed or sniffed a tobacco product in the past 12 months?			
Category	Count	Cumulative Count	Percent	Cumulative Percent
No	139	139	30.09	30.09
Yes	320	459	69.26	99.35
No response	3	462	0.65	100.00

Note. This question only applies to those who answered yes to question in table 12

Table 15: Differences in Past Year Tobacco Usage of Students According to Degree Year.

Degree Year	Past Year Tobacco Usage			
	No	Yes	No response	Row Totals
1st year	73	182	3	258
First Year %	28.29%	70.54%	1.16%	
% of Total Sample	15.80%	39.39%	0.65%	55.84%
4th year	65	135	0	200
Fourth Year %	32.50%	67.50%	0.00%	
% of Total Sample	14.07%	29.22%	0.00%	43.29%
No response	1	3	0	4
No Response %	25.00%	75.00%	0.00%	
% of Total Sample	0.22%	0.65%	0.00%	0.87%
Totals	139	320	3	462
Total Percent	30.09%	69.26%	0.65%	100.00%

Note. The differences in past year tobacco usage according to degree year are presented as a count and percentage of the degree year sample and the total sample.

Table 16: Past 30 Days Tobacco Usage.

Category	Have you smoked, chewed or sniffed a tobacco product in the past 30 days?			
	Count	Cumulative Count	Percent	Cumulative Percent
No	103	103	31.88854	31.8885
Yes	213	316	65.94427	97.8328
No Response	7	323	2.16718	100.0000

Note. This table only applies to those who answered yes in table 14 above.

Figure 2: Graphical Representation of Past 30 Days Tobacco Usage of Students.

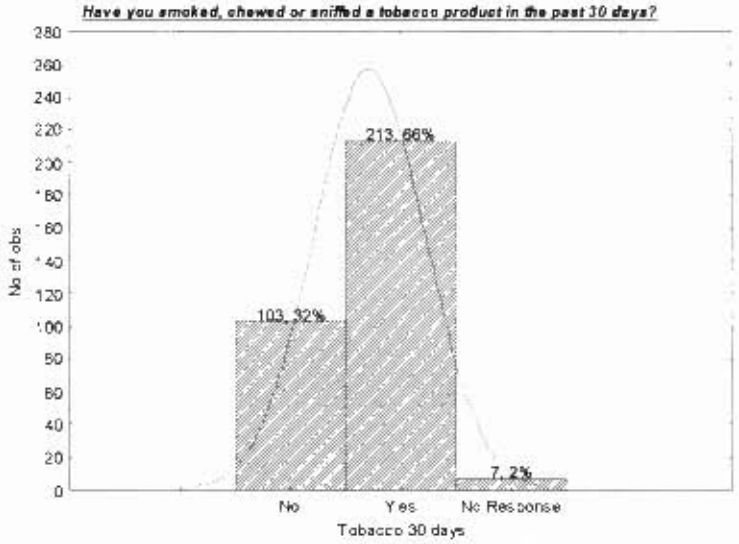


Table 17: Differences in Past 30 Days Tobacco Usage of Students according to Degree Year.

Degree Year	Past 30 Days Tobacco Usage			
	No	Yes	No Response	Row Totals
1st year	57	124	4	185
First Year %	30.81%	67.03%	2.16%	
% of Total Sample	17.65%	38.39%	1.24%	57.28%
4th year	45	87	3	135
Fourth Year %	33.33%	64.44%	2.22%	
% of Total Sample	13.93%	26.93%	0.93%	41.80%
No response	1	2	0	3
No Response %	33.33%	66.67%	0.00%	
% of Total Sample	0.31%	0.62%	0.00%	0.93%
Totals	103	213	7	323
Total Percent	31.89%	65.94%	2.17%	100.00%

Note. The differences in past 30 days tobacco usage according to degree year are presented as a count and percentage of the degree year sample and the total sample.

The chi square statistic for **degree year and tobacco** is 15.35 (df=2), p=.00. Cramers V = .15.

The chi square statistic for **degree and tobacco** is 11.64437 (df=2), p=.01. Cramers V=.13

The chi square statistic for **gender and tobacco** is 3.832174 (df=2), p=.15. Cramers V=.08.

Cannabis

Table 18: Modal Responses for Questions on Cannabis Usage.

Variable	Descriptive Statistics		
	Valid N	Mode	Frequency of Mode
Cannabis	674	2 = Yes	339
Cannabis 12 months	339	2 = Yes	227
Cannabis 30 days	228	1 = No	141

Mean age of respondents of when they first tried cannabis = 17.323. Valid N=328.

Table 19: Lifetime Cannabis Usage of Students.

	Have you ever taken any cannabis?			
Category	Count	Cumulative Count	%	Cumulative %
No	335	335	49.70	49.70
Yes	339	674	50.30	100.00
Missing	0	674	0.00	100.00

Table 20: Differences in Lifetime Cannabis Usage of Students according to Degree Year.

	Lifetime Cannabis Usage		
Degree Year	No	Yes	Row Totals
1st year	237	173	410
First year %	57.80%	42.20%	
% of Total Sample	35.16%	25.67%	60.83%
4th year	97	162	259
Fourth Year %	37.45%	62.55%	
% of Total Sample	14.39%	24.04%	38.43%
No response	1	4	5
No response %	20.00%	80.00%	
% of Total Sample	0.15%	0.59%	0.74%
Totals	335	339	674
Total Percent	49.70%	50.30%	100.00%

Note. The differences in lifetime cannabis usage according to degree year are presented as a count and percentage of the degree year sample and the total sample.

Table 21: Past Year Cannabis Usage of Students.

	Frequency table: Have you taken any cannabis in the past 12 months?			
Category	Count	Cumulative Count	%	Cumulative %
No	111	111	32.74	32.74
Yes	227	338	66.96	99.71
No response	1	339	0.29	100.00

Note. This table only applies to those who answered yes in table 19

Table 22: Differences in Past Year Cannabis Usage of Students according to Degree Year.

Degree Year	Past Year Cannabis Usage			
	No	Yes	No response	Row Totals
1st year	53	120	0	173
First Year %	30.64%	69.36%	0.00%	
% of Total Sample	15.63%	35.40%	0.00%	51.03%
4th year	57	104	1	162
Fourth Year %	35.19%	64.20%	0.62%	
% of Total Sample	16.81%	30.68%	0.29%	47.79%
No response	1	3	0	4
No Response %	25.00%	75.00%	0.00%	
% of Total Sample	0.29%	0.88%	0.00%	1.18%
Totals	111	227	1	339
Total Percent	32.74%	66.96%	0.29%	100.00%

Note. The differences in past year cannabis usage according to degree are presented as a count and percentage of the degree year sample and the total sample.

Table 23: Past 30 Days Cannabis usage of Students.

Category	Have you taken any cannabis during the past 30 days?			
	Count	Cumulative Count	%	Cumulative %
No	141	141	61.84	61.84
Yes 1-5	56	197	24.56	86.40
Yes 6-19	14	211	6.14	92.54
Yes 20+	16	227	7.02	99.56
No response	1	228	0.44	100.00

Note. This table only applies to those who answered yes in table 21

Figure 3: Graphical Representation of Past 30 Days Cannabis Usage of Students.

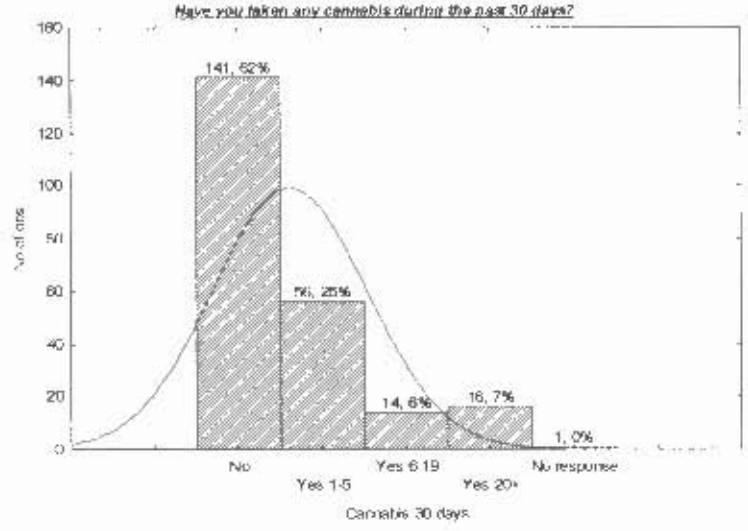


Table 24: Differences in Past 30 Days Cannabis Usage of Students according to Degree Year.

	Past 30 Days Cannabis Usage					
Degree Year	No	Yes, on 1-5 days	Yes, on 6-19 days	Yes, on 20+ days	No Response	Row Totals
1st year	76	30	6	8	0	120
First Year %	63.33%	25.00%	5.00%	6.67%	0.00%	
% of Total Sample	33.33%	13.16%	2.63%	3.51%	0.00%	52.63%
4th year	62	26	8	8	1	105
Fourth Year %	59.05%	24.76%	7.62%	7.62%	0.95%	
% of Total Sample	27.19%	11.40%	3.51%	3.51%	0.44%	46.05%
No response	3	0	0	0	0	3
No Response %	100.00%	0.00%	0.00%	0.00%	0.00%	
% of Total Sample	1.32%	0.00%	0.00%	0.00%	0.00%	1.32%
Totals	141	56	14	16	1	228
Total Percent	61.84%	24.56%	6.14%	7.02%	0.44%	100.00%

Note. The differences in past 30 days cannabis usage according to degree year are presented as a count and percentage of the degree year sample and the total sample.

The chi-squared statistic for **degree year and cannabis** = 28.10 (df=2), p=0. Cramers V=.20.

The chi-squared statistic for **degree and cannabis** = 20.90 (df=3), p=.0. Cramers V=.18

The chi-squared statistic for **gender and cannabis** = 17.28 (df=2), p=.00. Cramers V=.16.

OTHER MAIN SUBSTANCES OF USE AND ABUSE

Amphetamines and MDMA/ecstasy did not arise as most prevalent, yet were more prevalent than other hard substances, therefore the author decided to report briefly on them using measures of central tendency, percentages, cross tabulations and chi-squared statistics. Some of the results are described and not tabulated.

Amphetamine and Stimulant Usage Without a Prescription or a Doctors Advice

Mean age of respondent's first amphetamine/stimulant usage = 18.37. Valid N=102.

Have you ever taken any stimulants/amphetamines without doctors permission? 565 students (83.83%) said no, 108 students (16.02%) said yes, 1 person not responding.

Table 25: Differences in Lifetime Amphetamine/Stimulant Usage of Students according to Degree Year.

	Lifetime Amphetamine/Stimulant Usage			
Degree Year	No	Yes	No Response	Row Totals
1st year	360	49	1	410
First year %	87.80%	11.95%	0.24%	
% of Total Sample	53.41%	7.27%	0.15%	60.83%
4th year	202	57	0	259
Fourth Year %	77.99%	22.01%	0.00%	
% of Total Sample	29.97%	8.46%	0.00%	38.43%
No response	3	2	0	5
No Response %	60.00%	40.00%	0.00%	
% of Total Sample	0.45%	0.30%	0.00%	0.74%
Totals	565	108	1	674
Total Percent	83.83%	16.02%	0.15%	100.00%

Note. The differences in lifetime amphetamine/stimulant usage according to degree year are presented as a count and percentage of the degree year sample and the total sample.

Have you taken any amphetamines/stimulants in the past 12 months? This question only applies to those who answered yes to the question on ever usage. 52 students (47.71%) said no, 56 students (51.38%) said yes, and 1 person did not respond.

Table 26: Differences in Past Year Amphetamine/Stimulant Usage of Students according to degree Year.

	Past Year Amphetamine/Stimulant Usage			
Degree Year	No	Yes	No Response	Row Totals
1st year	19	30	1	50
First Year %	38.00%	60.00%	2.00%	
% of Total Sample	17.43%	27.52%	0.92%	45.87%
4th year	32	25	0	57
Fourth Year %	56.14%	43.86%	0.00%	
% of Total Sample	29.36%	22.94%	0.00%	52.29%
No response	1	1	0	2
No Response %	50.00%	50.00%	0.00%	
% of Total Sample	0.92%	0.92%	0.00%	1.83%
Totals	52	56	1	109
Total Percent	47.71%	51.38%	0.92%	100.00%

Note. The differences in past year amphetamine/stimulant usage according to degree year are represented as a count and percentage of the degree year sample and the total sample.

Amphetamine or other stimulant usage in the past 30 days. This question only applies to those who answered yes to past year usage. 39 students (68.42%) said no, 7 students (12.28%) said yes on 1-5 days, 2 students (3.51%) said yes on 6-19 days. 7 students (12.28%) said yes on 20 or more days and 2 people did not respond.

Table 27: Differences in Past 30 Days Amphetamine/Stimulant Usage of Students according to Degree Year.

	Past 30 days Amphetamine/Stimulant Usage					
Degree Year	No	Yes, on 1-5 days	Yes, on 6-19 days	Yes, on 20+ days	No Response	Row Totals
1st year	22	3	1	4	1	31
First Year %	70.97%	9.68%	3.23%	12.90%	3.23%	
% of Total Sample	38.60%	5.26%	1.75%	7.02%	1.75%	54.39%
4th year	16	4	1	3	1	25
Fourth Year %	64.00%	16.00%	4.00%	12.00%	4.00%	
% of Total Sample	28.07%	7.02%	1.75%	5.26%	1.75%	43.86%
No response	1	0	0	0	0	1
No Response %	100.00%	0.00%	0.00%	0.00%	0.00%	
% of Total Sample	1.75%	0.00%	0.00%	0.00%	0.00%	1.75%
Totals	39	7	2	7	2	57
Total Percent	68.42%	12.28%	3.51%	12.28%	3.51%	100.00%

Note. The differences in past 30 days amphetamine/stimulant usage according to degree year are presented as a count and percentage of the degree year sample and the total sample.

When asked about what type of stimulants the respondents took, dietary supplements and speed arose as the most prevalent, with 25 reports on speed usage and 33 reports of dietary supplement usage. Included in the dietary supplement usage were thinz, apple cider and vinegar diet pill, bioslim, hydroxycut, leanor, formula 2000, and eat less.

The chi-squared statistic for **degree year and stimulants/amphetamines** = 14.63 (df=4), p=.01. Cramers V=.10.

The chi-squared statistic for **degree and stimulants/amphetamines** = 8.13 (df=6), p=.23. Cramers V=.08.

The chi-squared statistic for **gender and stimulants/amphetamines** = 8.63 (df=4), p=.07. Cramers V=.08.

The measures of central tendency of the age of the respondents of when they first tried cannabis. Valid n = 81, mean = 18.15, median =18, mode =18, frequency of mode=15.

Have you ever taken MDMA or ecstasy? 587 students (87.09%) said no, 86 students (12.76%) said yes, and 1 student did not respond.

Table 28: Differences in Lifetime MDMA/ecstasy Usage of Students according to Degree Year.

	Lifetime MDMA/Ecstasy Usage			
Degree Year	No	Yes	No Response	Row Totals
1st year	373	36	1	410
First Year %	90.98%	8.78%	0.24%	
% of Total Sample	55.34%	5.34%	0.15%	60.83%
4th year	210	49	0	259
Fourth Year %	81.08%	18.92%	0.00%	
% of Total Sample	31.16%	7.27%	0.00%	38.43%
No response	4	1	0	5
No Response %	80.00%	20.00%	0.00%	
% of Total Sample	0.59%	0.15%	0.00%	0.74%
Totals	587	86	1	674
Total Percent	87.09%	12.76%	0.15%	100.00%

Note. The differences in lifetime MDMA/ecstasy usage according to degree year are presented as a count and percentage of the degree year sample and the total sample.

Have you taken any MDMA or ecstasy in the past 12 months? This question only applies to those who answered yes to ever usage. 36 students (41.38%) said no, 50 students (57.47%) said yes, and one student did not respond.

Table 29: Differences in Past Year MDMA/Ecstasy Usage of Students according to Degree Year.

	Past Year MDMA/Ecstasy Usage			
Degree Year	No	Yes	No Response	Row Totals
1st year	11	25	1	37
First Year %	29.73%	67.57%	2.70%	
% of Total Sample	12.64%	28.74%	1.15%	42.53%
4th year	24	25	0	49
Fourth Year %	48.98%	51.02%	0.00%	
% of Total Sample	27.59%	28.74%	0.00%	56.32%
No response	1	0	0	1
No Response %	100.00%	0.00%	0.00%	
% of Total Sample	1.15%	0.00%	0.00%	1.15%
Totals	36	50	1	87
Total Percent	41.38%	57.47%	1.15%	100.00%

Note. The differences in past year MDMA/ecstasy usage according to degree year are presented as a count and percentage of the degree year sample and the total sample.

Have you taken any MDMA or ecstasy in the past 30 days? This question only applies to those who answered yes to past year usage. 40 students (78.43%) said no, 7 students (13.73%) said yes on 1-5 days, 1 student (1.96%) said yes on 6-19 days and on 20 or more days and two students did not respond.

Table 30: Differences in Past 30 Days MDMA/Ecstasy Usage of Students according to Degree Year.

	Past 30 Days MDMA/Ecstasy Usage					
Degree Year	No	Yes, on 1-5 days	Yes, on 6-19 days	Yes, on 20+ days	No Response	Row Totals
1st year	20	3	1	0	2	26
First Year %	76.92%	11.54%	3.85%	0.00%	7.69%	
% of Total Sample	39.22%	5.88%	1.96%	0.00%	3.92%	50.98%
4th year	20	4	0	1	0	25
Fourth Year %	80.00%	16.00%	0.00%	4.00%	0.00%	
% of Total Sample	39.22%	7.84%	0.00%	1.96%	0.00%	49.02%
Totals	40	7	1	1	2	51
Total Percent	78.43%	13.73%	1.96%	1.96%	3.92%	100.00%

Note. The differences in past 30 day MDMA/ecstasy usage according to degree year are presented as a count and percentage of the degree year sample and the total sample.

The chi-squared statistic for **degree year and MDMA/ecstasy** – 15.45 (df–4), p=.00, Cramers V=.11.

The chi-squared statistic for **degree and MDMA/ecstasy** = 6.03 (df=6), p=.42, Cramers V=.07

The chi-squared statistic for **gender and MDMA/ecstasy** = 2.26 (df=4), p=.69, Cramers V=.04.

DISCLOSURE

The following tables indicate the extent to which respondents would disclose their drug and/or alcohol habits. These tables specifically deal with alcohol and/or drug abuse as opposed to general use that has been reported earlier. Tables 31-33 outline the willingness of students to admit to abusing alcohol and or drugs, abuse being defined as having 5 or more drinks in a row on five more occasions in the past 30 days. If students were willing to admit to abusing drugs/alcohol, they were then asked if in fact they do abuse drugs and/or alcohol and tables 34-36 and figure 4 relate show those results.

Table 31: Modal Response for Willingness to Admit to Drug/Alcohol Abuse.

	Modal Response		
Variable	Valid N	Mode	Frequency of Mode
Would you admit to abusing drugs/alcohol	674	1 = No	424

Table 32: Frequency Table for Willingness to Admit to Drug/Alcohol Abuse.

	Frequency table			
Category	Count	Cumulative Count	Percent	Cumulative Percent
No	424	424	62.91	62.91
Yes	244	668	36.20	99.11
No Response	6	674	0.89	100.00

Table 33: Willingness to Admit to Abusing Drugs/Alcohol according to Gender.

	Admit to abusing drugs/alcohol			
Gender	No	Yes	No Response	Row Totals
Male	225	152	4	381
Male %	59.06%	39.90%	1.05%	
Total Sample %	33.38%	22.55%	0.59%	56.53%
Female	196	90	2	288
Female %	68.06%	31.25%	0.69%	
Total Sample %	29.08%	13.35%	0.30%	42.73%
No Response	3	2	0	5
No Response %	60.00%	40.00%	0.00%	
Total Sample %	0.45%	0.30%	0.00%	0.74%
Totals	424	244	6	674
Total Percent	62.91%	36.20%	0.89%	100.00%

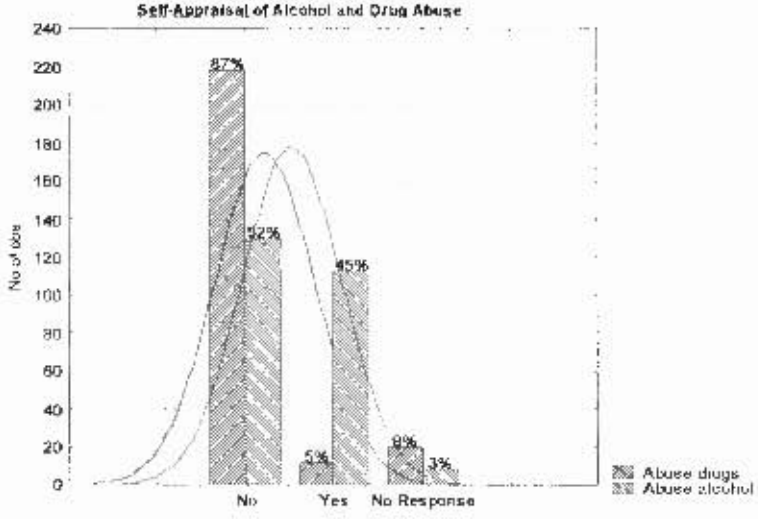
Note. Table 33 shows the willingness of students to admit if they abuse drugs/alcohol as a count and percentage of the gender sample and the total sample.

Table 34: Modal Response for Self-Appraisal of Drug and Alcohol Abuse.

	Measure of Central Tendency		
Variable	Valid N	Mode	Frequency of Mode
Do you abuse drugs?	250	1 = No	218
Do you abuse alcohol?	250	1 = No	130

Note. The table only applies to those who were willing to admit to abusing drugs/alcohol.

Figure 4: Self-Appraisal of Alcohol and Drug Abuse



Note. This figure applies to those who were willing to admit to abusing drugs/alcohol

Table 35: Differences in Self-Appraisal with regard to Drug Abuse according to Gender.

Gender	Do you abuse drugs?			
	No	Yes	No Response	Row Totals
Male	134	8	14	156
Male %	85.90%	5.13%	8.97%	
Total Sample %	53.60%	3.20%	5.60%	62.40%
Female	82	4	6	92
Female %	89.13%	4.35%	6.52%	
Total Sample %	32.80%	1.60%	2.40%	36.80%
No Response	2	0	0	2
No Response %	00.00%	0.00%	0.00%	
Total Sample %	0.80%	0.00%	0.00%	0.80%
Totals	218	12	20	250
Total Percent	87.20%	4.80%	8.00%	100.00%

Note. This table only applies to those who were willing to admit to abusing drugs/alcohol.

Table 36: Differences in Self-Appraisal with regard to Alcohol Abuse according to Gender

Gender	Do you abuse alcohol?			
	No	Yes	No Response	Row Totals
Male	72	79	5	156
Male %	46.15%	50.64%	3.21%	
Total Sample %	28.80%	31.60%	2.00%	62.40%
Female	58	31	3	92
Female %	63.04%	33.70%	3.26%	
Total Sample %	23.20%	12.40%	1.20%	36.80%
No Response	0	2	0	2
No Response %	0.00%	100.00%	0.00%	
Total Sample %	0.00%	0.80%	0.00%	0.80%
Totals	130	112	8	250
Total Percent	52.00%	44.80%	3.20%	100.00%

Note. This table only applies to those who were willing to admit to abusing drugs/alcohol.

Table 37: Modal response for the extent to which the Respondents found it easy or difficult to get certain Substances on UCT Campuses

	Descriptive Statistics - Modal Response		
Variable	Valid N	Mode	Frequency of Mode
Marijuana	674	3 = Do not know	227
Cigarettes	674	5 = Very easy	517
Alcohol	674	5 = Very easy	267
Cocaine	674	3 = Do not know	478
Heroin	674	3 = Do not know	494
Sedatives	674	3 = Do not know	490
Amphetamines or Stimulants	674	3 = Do not know	503
Tranquilisers	674	3 = Do not know	510
Inhalants or Stimulants	674	3 = Do not know	471
Hallucinogens	674	3 = Do not know	506

Note. For a more detailed analysis of how difficult or easy the respondents think it is to get the above substances on UCT campuses please consult Appendix B.

The following statements relate to UCT rules and policies. The students were asked to answer yes, no, do not know to certain statements pertaining to UCT. These results will be portrayed for the whole sample. For a tabular representation of these results broken down according to degree year, refer to Appendix B.

- Statement 1: UCT does not allow alcohol on its premises. Yes: Valid n = 309 (45.85%). No: Valid n = 208 (30.86%). Do not know: Valid n = 153 (22.7%). No Response: Valid n = 4 (0.59%).
- Statement 2: UCT Provides alcohol free food facilities. Yes: Valid n = 538 (79.94%). No: Valid n = 36 (5.35%). Do not know: Valid n = 97 (14.41%). No Response: Valid n = 2 (0.3%).
- Statement 3: I am not allowed to carry alcohol and drugs while on UCT campuses. Yes: Valid n = 443 (65.82%). No: Valid n = 82 (12.18%). Do not know: Valid n = 143 (21.25%). No response: Valid n = 5 (0.74%).
- Statement 4: UCT has a formal policy on alcohol and drug use. Yes: Valid n= 358 (53.19%). No: Valid n = 31 (4.61%). Do not know: Valid n = 281 (41.75%). No response: Valid n = 3 (0.45%).

- Statement 5: I feel that a formal policy on alcohol/drug usage at UCT is necessary.

  Yes: Valid n – 516 (76.79%). No: Valid n = 80 (11.90%). Do not know: Valid n = 72 (10.71%). No response: Valid n – 4 (0.60%).

- Statement 6: UCT is doing enough to address the issue of substance abuse amongst students.

  Yes: Valid n = 88 (13.08%). No: Valid n – 297 (44.13%). Do not know: Valid n – 284 (42.2%). No response: Valid n = 4 (0.59%).

- Statement 7: I feel that some form of spot checks/testing at UCT is necessary.

  Yes: Valid n=159 (23.63%). No: Valid n=383 (56.91%). Do not know: Valid n=124 (18.42%). No response: Valid n=7 (1.04%).

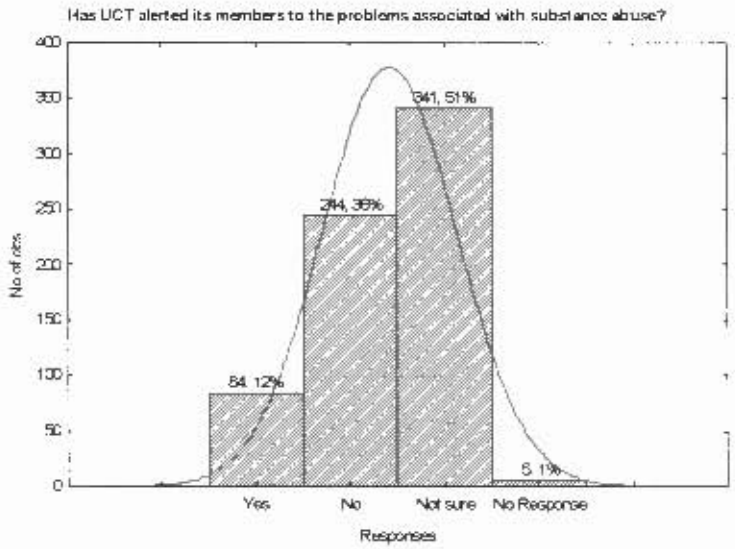
- Statement 8: I would have objections to spot checks/testing at UCT.

  Yes: Valid n=317 (47.17%). No: Valid n=294 (43.75%). Do not know: valid n=59 (8.78%). No response: valid n=2 (0.30%).

- Statement 9: If UCT does or had to do spot checks/testing I am worried that I may be exposed.

  Yes: Valid n=62 (9.21%). No: valid n=565 (83.95%). Do not know: valid n=42 (6.24%). No response: valid n=4 (0.59%).

Figure 5: Extent to which Students Know whether UCT has alerted its Members to the Problems associated with Substance Abuse.



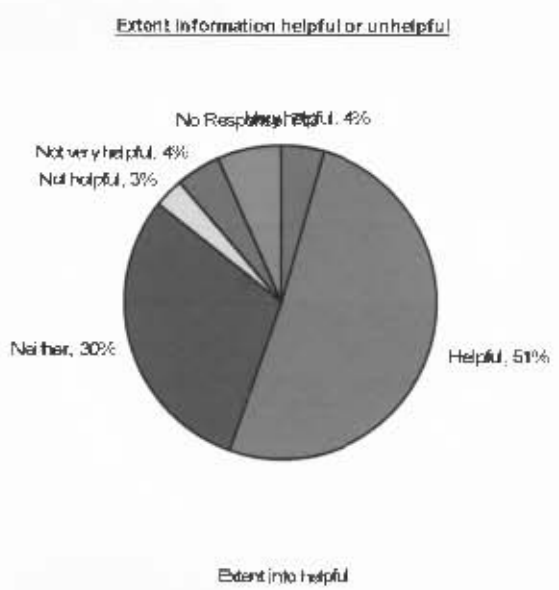
674 students responded to the question of whether UCT has alerted its members to the problems associated with substance use. The mode (the measure of central tendency) was 3=not sure with the frequency of the mode=341.

Table 38: Ways in which Students have been alerted to the Problems associated with Substance Use/Abuse

Valid N	*Ways in which students have been alerted to problems associated with substance use/abuse*
76	Posters
31	Seminars/Courses
4	Letters
7	Other means

The respondents were asked two questions about information received by UCT. They were asked to answer yes or no to these questions. Re information on long-term health effects of alcohol/drug abuse: Valid N = 674. 78.93% of students said no. Re information on how to recognise someone with a drinking problem: Valid N=674. 77.6% of the sample said no.

Figure 6: Graphical Representation of the extent to which the Students found the information provided by UCT helpful/unhelpful in understanding substance abuse related problems.



When students were asked whether they were aware of a substance abuse policy at UCT only 15.727% said they were aware of one. 19.58457% of students were aware of counselling services offered at UCT for substance use/abuse related problems, 15.28% were aware of prevention programmes and 12.46% were aware of drug rehabilitation referrals.

Figure 7: Students perceptions of whether UCT should have policies regarding the use and abuse of legal and illegal substances.

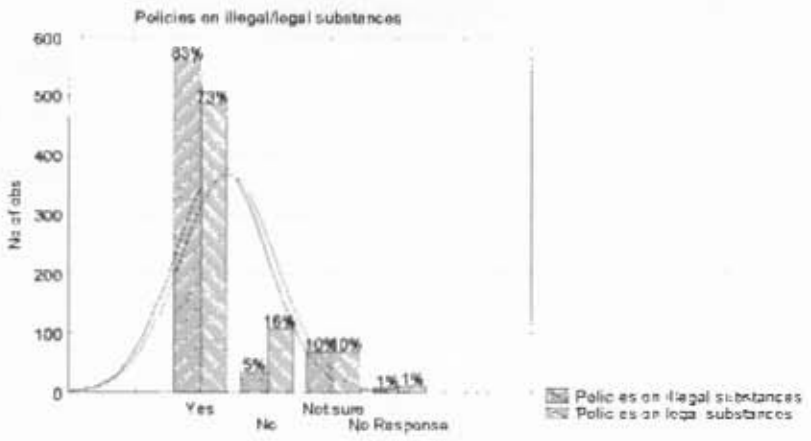


Figure 8: Graphical Representation of Student Support for Alcohol-free UCT events.

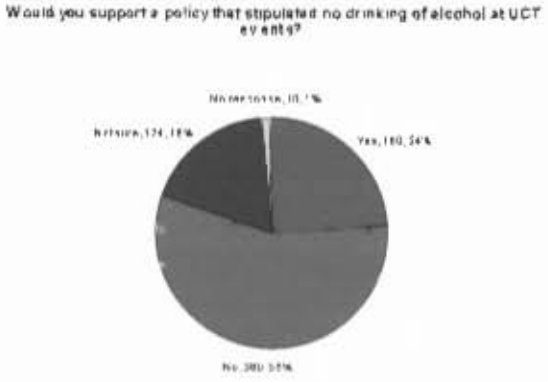
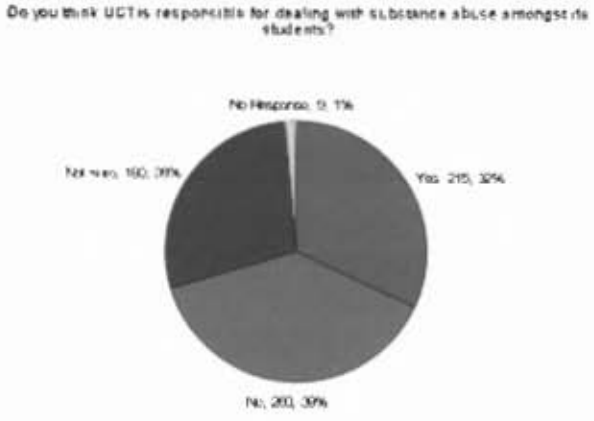


Figure 9: Students thoughts on whether UCT is responsible for dealing with Drug and Alcohol use amongst its Students or not.



This chapter has displayed the results of the research graphically. Initially the results of the top three substances that arose as most prevalent were presented followed by a brief section on the two most prevalent illicit substances of use in the sample after cannabis. Subsequently a presentation of the descriptive statistics for disclosure of drug and/or alcohol use and questions relating to UCT were presented. The next chapter will present a discussion of the above results.

CHAPTER 4
DISCUSSION OF RESULTS

A detailed discussion and analysis of all results is undertaken in order to determine the prevalence of substance use amongst a student sample located within the Commerce Faculty of the University of Cape Town. The analysis will increase our understanding and knowledge of the prevalence of substance use amongst students in the Commerce Faculty and as a result will allow us to manage it more effectively.

The analysis of the results will enable us to comment on the differences and similarities in first and fourth year respondent's experiences of substance use and their perceptions of UCT's responsibility towards managing substance use on its campuses. The results will be discussed according to the two main result areas outlined in chapter three, namely prevalent substances of use and university related questions i.e. students perceptions of UCT's responsibility towards managing substance use amongst its students.

To begin with, the three most prevalent substances of use that were outlined in the results section, specifically alcohol, tobacco and cannabis, will be discussed. The discussion will focus on research and literature related to each substance. Following that a section on comparisons of alcohol, tobacco and cannabis use will be provided. Subsequently a section on other substances that will focus on the two illicit drugs that arose as most prevalent after cannabis, specifically amphetamines/stimulants and MDMA/ecstasy will be presented. Lastly, student perceptions about UCT's responsibility towards managing substance use amongst its students will be discussed.

In this chapter lifetime usage pertains to whether the students have ever used or tried the specific substance being discussed. If they said yes to lifetime usage, it meant that at some point in their lives they had tried or used the substance. Past year use of a substance refers to use of that specific substance in the 12 months prior to the study. Past month use of a substance refers to use of that specific substance in the 30 days prior to the study. The research that this report is based will be referred to as the current study.

Alcohol

General Alcohol Use Amongst Students

The current research results correspond with much research done in the area of college alcohol use at American universities, which show that substance abuse at American Universities is characterised mainly by the abuse of alcohol (Licciardone, 2003; O'Malley & Johnston, 2002; Prendergast, 1994; Presley & Meilman, 1994). According to the literature, alcohol use rates are very high among college students with approximately two out of five students being heavy drinkers (defined as having had five or more drinks in a row in the past two weeks) (The Annual National Household Survey on Drug Abuse (NHSDA), 2001; O'Malley & Johnston).

Alcohol arose as the most prevalent substance of use amongst the sample with 88.72% of the respondents having at least tried alcohol at some time in their life, with 95.65% of those respondents having drunk alcohol in the year prior to the study and 85.31% of those respondents having consumed alcohol in the 30 days prior to the study.

In comparing a research study on substance use among university students at a Texas based university campus with the current study, it was found that for both the current sample and the Texas based sample, alcohol arose as the principle substance of use (Kerber & Wallisch, 1997). However, results indicated that more UCT students have consumed alcohol than the Texas based sample (Kerber & Wallisch).

In the Texas study 88% of the sample reported having at least drunk one alcoholic beverage in their lifetimes, with 82% of those students having consumed alcohol in the year prior to the study and 69% of those having consumed alcohol in the month prior to the study (Kerber & Wallisch). The current studies figures for past year usage (95.65%) and past month usage (85.31%) were higher than the Texas study. This could be attributed to the lower legal alcohol consumption age in South Africa, being 18 years of age, opposed to 21 years of age in the United States of America. Another possible explanation could be that alcohol consumption has been reported to be extremely high in South Africa (Bhana & Wilford, 1996) with access to alcohol in South Africa being exceptionally easy (Strachan, 1999). Alcohol remains the most commonly abused drug in

South Africa (Albertyn & McCann, 1993; Parry & Bennetts, 1998), with South Africans consuming well over 5 billion litres of alcoholic beverages per year (Parry, 1998).

In a study that looked at patterns of alcohol use, cigarette smoking, and other substance use among Chinese University Students in Hong Kong current and past alcohol use was reported as the most used substance (61%) (Abdullah, Fielding & Hedley, 2002). The term 'ever' drinker described regular (drink daily/most days of a week), intermittent (drink 1-3 days a week) and occasional drinkers (drink on a special occasion only), while the term 'never drinker' described lifetime non drinkers (had never drunk alcohol). 1% of the sample were regular drinkers, 18% intermittent, 42% occasional and 39% non drinkers (Abdullah et al., 2002).

In the current study 88.72% of the sample said that they had tried alcohol referred to as lifetime usage. Only 11.28% of the sample were classified as "never drinkers" i.e. never having drunk an alcoholic beverage compared with the Chinese sample of 39% non drinkers, this is a noteworthy difference, showing that more South African university students drink than Chinese university students. The Chinese study broke down drinking habits according to how many times a week a student drinks, whilst the authors study looked at how many times in the past month a student has used alcohol (Abdullah, et al., 2002). In the Chinese study 14% of the ever alcohol users had consumed 5 or more alcoholic drinks in the past month, compared with 33% of the authors sample who admitted to having more than 6 drinks in the past month.

This result of the current sample drinking more than Chinese students shows that it is likely that a vast majority of Commerce students use alcohol and use alcohol to a large degree. In developing countries like South Africa alcohol-related problems commonly result in trauma, violence, organ system damage, various cancers, unsafe sexual practices and general poor nutritional status of families with a heavy drinking parent/parents (Parry, 2000).

Alcohol and Age of First Use

The mean age of the respondents of when they first tried alcohol was 15.1 years of age. Based on the findings of the Department of Health's South African demographic and health survey (SADHS) conducted in 1998 by the Medical Research Council (MRC) and Macro International Inc., just under half of men (45%) and one-fifth of women (17%) 15

years and older reported that they currently consume alcohol (Parry, 2000). This is similar to the current studies findings that reported the mean age of first alcohol use to be 15.1 years of age. In Western societies, alcohol use commonly begins in adolescence ages 13-18 (Masterman & Kelly, 2003).

In a study conducted by Peltzer and Phaswana (1999) on the prevalence, patterns and experiences of drug use (especially alcohol and cannabis) among South African University students at the University of the North, the majority of the respondents reported that their first experience of alcohol and cannabis was at age 17 or older. What is interesting to note is that the results of the current study indicate that the age of the UCT respondent's first experience of alcohol is younger (15.1 years of age) than those at the University of the North. There is a difference here with regards to age of first alcohol use and the author suggests that future research concentrate on the differences with regards to consumption patterns at different universities at different geographic locations across South Africa.

A possible explanation for the discrepancy noticed between the two universities is that substance abuse is much higher in Cape Town than anywhere else in South Africa (Erasmus, 2005). One of the reasons for this is that Cape Town is a Port City, allowing easy access to drugs from around the world (Erasmus). South Africa has been welcomed into the international community and is therefore open to the world (Ryan, 1997). The benefits include increased investment and tourism (Ryan). However there is a downside to this openness and that being increased substance use (Ryan).

Another plausible explanation for the differences seen in the two universities drinking patterns could be the cultures of the two universities, which could influence the difference in age of first alcohol usage.

Alcohol Use and Degree Year

Lifetime usage of fourth year students was 94.21% compared to the lifetime usage of first year students, which was 85.12%. 95% of both groups (first and fourth years) had used alcohol in the12 months prior to the study. First years were significantly higher in their alcohol intake in the past 30 days (58%) compared to fourth year students (40.9%). But overall across all categories of alcohol usage, alcohol consumption for both groups was the lowest in the month prior to the study. The time of year this study was conducted,

which was just before final examinations, could be a possible explanation for the fourth year alcohol intake being the lowest in the month prior to the study. This could be due to pressure of completing and passing final year examinations. A probable explanation for fourth year students being higher in the lifetime usage category is that they are older and hence have had more opportunities to try alcohol.

A study that examined alcohol, tobacco and other drug use amongst first and final year nursing students at a Scottish university found that there were few significant differences between consumption patterns of first and fourth year students, which suggests no change in alcohol usage as these students went through their training (Engs & Rendell, 1987). This result is dissimilar to the current study, which found statistically significant differences between first and fourth year lifetime alcohol usage and in the month prior to the study, but is similar to the current sample as there was no difference found in the current samples drinking habits in the year prior to the study. The chi-squared statistic for degree and alcohol usage had a significance level of p=. 00104. This indicates a strong relationship between year of study and alcohol usage.

A study that examined alcohol related emergencies in undergraduate college students at Vanderbilt University in Nashville, Tennessee found that 56% of the students with alcohol related disorders were males (Wright & Norton, 1998). The incidence rate for a suspected or definite alcohol related disorder was 1.7% of all undergraduate students on the campus per academic year, anticipating that about 1 out of every 15 undergraduate students would come to the emergency department with an alcohol-related complaint during the four year college career (Wright & Norton). This study again highlights the drinking problem in first year college students, especially males. However, the current study did not find significant differences in male and female alcohol consumption rates. The chi-squared statistic for gender and alcohol = 3.872235 (df=2), p=. 14427. This shows that there is no significant association between gender and alcohol usage in the current sample.

A study that compared self-report drinking practices of Masters students in social work with undergraduate students from universities in the Northeast of the United States of America, found that the master's students, within age and gender categories did not drink as excessively as the undergraduate students (Gassman, Demone & Wechsler, 2002). In the present study it was found that fourth year students have higher lifetime drinking rates and a slightly higher drinking rate in the year prior to the study than first

year students. Please see Table 6 in chapter 3. This result is dissimilar to the Gassman et al., (2002) result above, as they reported that the masters' students (post graduates) did not drink as much as the undergraduate students.

Another study conducted at the University of the North looked at substance use among first year university students (Peltzer, Malaka & Phaswana, nd). Results indicated that past month (30 days) or current substance use was most common for using alcohol. This result is incongruent with the current studies results, which showed that across all alcohol categories, past month usage was lower for both first year and fourth year students.

Despite the lower alcohol intake in the month prior to the current study across both groups (first and fourth year students), the above studies results concur with the result of the current research which found that undergraduate students (first year students) alcohol usage in the month prior to the study was significantly higher than the post graduate students (fourth year students).

The chi-squared statistic for degree year and alcohol displayed a significance level of p=. 00104 indicating that these two variables are strongly associated. Once again reiterating the authors' findings that first year students drink more than fourth year students. The chi square statistic for degree and alcohol also showed a strong association with p=. 03130.

In a study that looked at substance use problems reported by college students it was found that nearly 83% of the sample of 409 undergraduate college students registered at the study university in 1999, had reported using alcohol in the 30 days prior to the study (Shillington & Clapp, 2001). In the current study it was reported that 85.31% of the sample had used alcohol in the 30 days prior to the study. These studies are different in their research question and purpose yet are related in the fact that both looked at drinking habits in the month prior to the study and both discovered similar results in students drinking habits in the month prior to the study.

Two studies were conducted using nation wide Norwegian samples of medical students on the use of alcohol to cope with tension, and its relation to gender, and years in medical school. It showed that drinking to intoxication 2-3 times a month or more was reported by 14% of all medical students, 24% men and 6% women (Tyssen, Vaglum, Aasland, Gronvold & Ekeberg, 1998). There was a significant difference between the junior and senior students in the use of alcohol to cope with tension, with senior students

using alcohol to cope with tension less often (Tyssen et al., 1998) This study's results correlate with the authors' results as both studies have shown a significant association between year of study and alcohol usage and less of an association between gender and alcohol intake.

Alcohol Abuse and Binge Drinking

In the current study, the students were asked two questions specifically dealing with the abuse of drugs and/or alcohol. The first question asked if the students would admit to abusing drugs and/or alcohol and the second question asked if yes to the previous question do they in fact abuse drugs and/or alcohol. 45% of those students who would admit to abusing alcohol/drugs said yes, they do abuse alcohol. Abuse in the current study was defined as having 5 or more drinks in a row on five or more occasions in the past 30 days. Not much research on the concept of alcohol abuse was found in the literature on American college student's alcohol usage.

Much more research has been conducted on the concept of binge drinking (National Household Survey on Drug Abuse (NHSDA), 2001; O'Malley & Johnston). Binge drinking is currently defined as the consumption of five or more drinks in a row at least once in the past two weeks for men, and four or more drinks in a row for women (Wechsler & Kuo, 2000; Wechsler & Nelson, 2001). The two definitions (the one used by the current author and the one used to define binge-drinking in the literature) are very similar, both use the concept of five or more drinks in a row, yet the current studies definition includes consumption over a 30 day period and the other definition includes consumption over a fortnight. Despite the slight differences, results from the current study can be compared to results from studies that focused on binge drinking.

Binge drinking among young people in South Africa, especially males is high (in excess of 25% in many communities) (Parry, 1998). Adult per capita consumption of absolute alcohol in South Africa is between 9 and 10 litres per year, which places South Africa among the higher alcohol consuming nations (Parry). This could be a reason for such high binge drinking rates in South Africa. The current studies results indicated that of those who were willing to admit to alcohol abuse, 44.8% said that they do abuse alcohol, with abuse being defined as having 5 or more drinks in a row on five more occasions in the past 30 days.

A study that assessed college student's binge drinking habits indicated that 41.5% of the respondents were current binge drinkers with men more likely than women to binge drink and that white students were significantly more likely than black and Hispanic students to binge drink (Jones, Oeltmann, Wilson, Brener & Hill, 2001). The present study did not look at race as a demographic variable so no comment can be made on differences between races drinking habits in the present sample. However, with regards to gender, the current study found no significant difference between males and females with regards to alcohol consumption. This result of 41.5% of respondents being existing binge drinkers (Jones et al., 2001) coincides with the results found in the current study, which showed that 44.8% of students admitted to abusing alcohol, abuse being defined as 5 or more drinks in a row on five or more occasions in the past 30 days.

Alcohol Use and Gender

With regards to the relationship between gender and alcohol usage, the chi-squared statistic for gender and alcohol = 3.872235 (df=2), p=. 14427. This shows that there is no significant association between gender and alcohol usage in the current sample. When looking at the percentages the only significant difference lay in lifetime alcohol usage with 90.55% of males having at least tried alcohol at sometime in their lives compared to only 86.11% of females having at least tried alcohol at sometime in their lives. This indicates that more males have tried alcohol compared to females. However when it came to past year and past month alcohol usage there were slight difference with more females (8.9%) having used alcohol on 20 or more days in the past month than males (6.67%).

The above result is different to results obtained in a study done with undergraduate college students in the United States, which looked at binge drinking and the implications for other substance use. The study found that male students were significantly more likely than the female students to be binge drinkers (Jones et al., 2001). Binge drinking in this study was defined as five or more drinks of alcohol in a row on at least 1 day during the past 30 days preceding the study (Jones et al.). In the current study when asked whether the students would admit to abusing alcohol, with abuse being defined as having 5 or more drinks in a row on five or more occasions in the past 30 days preceding the survey, 39.9% of males said they would admit to abusing alcohol/drugs

compared to 31.25% of females. Of those 39.9% of males, 50.64% said they do abuse alcohol, compared to 33.7% of females.

Of those 39.9% of males who said they would admit to abusing drugs/alcohol, only 5.13% answered yes, when asked if they do abuse drugs. 4.35% of women said yes, they do abuse drugs. In a study that looked at identifying male college students perceived health needs, barriers to seeking help and recommendations to help men adopt healthier lifestyles, out of all the men's health issues and concerns, alcohol and drug use was listed as the most important health concern based on the participants frequency of endorsement (Davies et al., 2000). According to the authors' young men of traditional college age (between 15 and 24 years of age) are more likely than women to use alcohol and drugs (Davies et al.). This has not been proven in the current study, as there was no significant difference between male and female students' alcohol consumption.

In a study that assessed self-efficacy, alcohol expectancy and problem solving appraisal as predictors of alcohol use in college students, results indicated more drinking by males than females, with males reporting more than three times as many drinks per week compared to females (Biscaro, Broer & Taylor, 2004). The results also showed that males tended to drink more per week and binge more frequently than females (Biscaro, et al., 2004).

In another study that compared male and female Scottish post-secondary helping profession students drinking habits, it was found that a higher percentage of male students drank more alcohol more often than their female counterparts (Engs & von Teijlingen, 1997).

These three studies findings are dissimilar to the findings of the author's study, which showed no major relationship between alcohol usage and gender, suggesting that there is no significant difference between men and women in the commerce faculty at UCT who are in first and fourth year in terms of alcohol consumption. The current study's result concurs with the research done at the Texas university which also showed no significant difference between males and females in terms of lifetime alcohol use, with males (66.1%) being slightly higher than females (72.5%) in past month usage (Kerber & Wallisch, 1997).

This result is extremely pertinent as it suggests that alcohol awareness campaigns should be geared at both sexes. In the literature it has been found that male college students drink more than female college students (Jones et al., 2001; Local6.com, 2003;

NHSDA, 2001; O'Malley & Johnston, 2002; Peltzer, 2003). A possible explanation for the relatively even spread of drinking between males and females at UCT is that UCT is a diverse campus and research has shown that increase in diversity in terms of females, minorities and older students moderates the excessive usage of alcohol by males especially white males (Local6.com; Wechsler & Kuo, 2003).

Although problematic alcohol use occurs across many age groups, young adults aged 18-24 years show the highest rates of alcohol use and have the highest percentage of problem drinkers (U.S. Department of Health and Human services, 1997, as cited in Ham & Hope, 2003). The ages of 18-24 are associated as the ages that one goes to a university. This indicates that more social control needs to be placed on alcohol consumption of university students. The fact that many students in the current study have admitted to not knowing UCT rules and policies with regards to alcohol use suggests that more social control needs to be in place to prevent students from harmful drinking.

Students and young adults may turn to alcohol and illicit drugs to alleviate the stress associated with changes that occur during adolescence and the entry into young adulthood or late adolescence, which is characterised as a period of dramatic physical and psychological transformation and experimentation (Prendergast, 1994; Trad, 1994). It is a crucial phase of psychological development, whereby teenagers are learning to shape their lives, form their own identities and deal with stress (Alcohol and Drug Prevention, 1999; Drug Abuse, 2003). It is also a period of transition in emotional development, educational and vocational activities, living arrangements and economic and marital status (Prendergast). The majority of university students are at some stage in their university career in growth from childhood to adulthood (Nowlis, 1970).

For university students, late adolescence is often a time when they are no longer under direct parental supervision resulting in a substitution of dependence for independence (Nowlis, 1970). It is a time when they face new situations, new academic and social pressures, and enter an environment where the use of intoxicating substances, mainly alcohol is normative (Beman, 1995; Prendergast, 1994). Research does suggest that peer contexts have a considerable impact on adolescent substance use (Barnes & Welte, 1986, as cited in Allison et al., 1999).

Whatever the cause of onset, problematic alcohol use can lead to increased drug use and other delinquent activities (Beman, 1995).

The next section discusses the results of tobacco use amongst the sample.

Tobacco

General Tobacco Usage Amongst Students

Tobacco arose as the second most prevalent substance of use and abuse amongst the sample with 68.5% of the respondents having at least tried a tobacco product at some time in their life, with 69.3% of those respondents having used tobacco in the past year and 66% of those respondents having smoked, chewed, sniffed a tobacco product in the 30 days prior to the study.

In the same Texas university survey mentioned earlier it was found that nearly half (45%) of the sample have used tobacco at sometime in their lives, with 26% having used in the month prior to the study (Kerber & Wallisch, 1997). This is dissimilar to the current study, which found a much higher tobacco usage rate in the month prior to the study (66%) and in the lifetime usage category (68.5%).

In a study on smoking addiction among university students in Istanbul research was done on how many cigarettes were smoked a day in order to gauge addiction levels. In the current study, only ever, past year and past month usage was researched. It was reported that 66% of those respondents who smoked in the past year, smoked in the past 30 days. However, how many cigarettes they smoked was not established. (Onal, Tumerdem & Ozel, 2002).

Tobacco and Age of First Use

The mean age of the respondents when they first tried tobacco was 15.2 years of age. In the same study on Chinese students that looked at patterns of cigarette smoking, alcohol use and other substance use among Chinese University Students in Hong Kong only 13% of the sample used tobacco (Abdullah et al., 2002). 'Ever smoking' behaviour was categorised by smoking at least 7 cigarettes a week for the past month. 39% of ever smokers had first smoked before 17 years of age and more males reported smoking than females. This concurs with the current study, which found that consistently more males smoked than females. The mean age of the current study's respondents of when they first tried tobacco was 15.2, significantly lower than the Chinese students (Abdullah et al.).

Tobacco Use and Degree Year

The chi-squared statistics for degree year and tobacco showed a significant association with p=. 00047 indicating that there is a strong association between degree year and tobacco usage. This result concurs with the descriptive statistics results in the current study that show that first year students are higher in their tobacco usage in the past month (67.03%) compared with fourth year students (64.44%) and in the past year (70.54%) compared with fourth year students (67.50%).

Tobacco Use and Gender

In the current study it was found that males consistently smoked more than females, but there was no statistically significant association between gender and tobacco usage with p=. 14719. The Istanbul study on smoking addiction among university students, found that 36% of the sample were addicted to smoking, 41.3% males and 26.7% females (Onal et al., 2002), yet it also found that there were no statistically significant differences in smoking addiction between genders in the faculties except in the medical faculty (Onal et al.).

In the study using Chinese students as its sample, mentioned above, more males reported smoking than females (Abdullah et al., 2002). This concurs with the current study, which found that consistently more males smoked than females.

Cannabis

General Cannabis Use Amongst Students

Cannabis arose as the third most prevalent substance of use and the first most prevalent illicit substance of use amongst the sample with 50.3% of the respondents having at least tried cannabis at some time in their life, with 66.96% of those respondents having used cannabis in the past year and 37.72% of those respondents having used cannabis in the past 30 days. Of the 37.72%, the majority used cannabis between 1-5 days (24.56%). The mean age of the respondents when they first tried cannabis was 17 years of age.

In the same Texas university survey mentioned earlier it was found that of all illicit drugs cannabis was the most popular, with 29% of the sample having used cannabis during their lifetimes, and 11% of those students having used in the month prior to the study (Kerber & Wallisch, 1997). The current study also found cannabis to be the most popular illicit drug, yet the cannabis usage is higher for the current study, than the Texas study with 37.72% of students who used cannabis in the past year, using in the month prior to the study compared with the Texas results of 11%. A possible explanation could be due to the fact that there is probably no illicit market that benefits Southern Africa's poor more than the thriving market for cannabis, which is grown and marketed in South Africa (Gastrow, 2003). South Africa now ranks among the worlds largest producers of cannabis, most of which is consumed in South Africa and Southern Africa, with some shipments made to the United Kingdom and the Netherlands (The Drug Advisory Board, 1999). Since 1990 changes in the political situation of South Africa, the opening of trade and the movement of people have been associated with the increased use of cannabis (Parry & Bhana, 1997, as cited in Saxena & Donoghoe, 2000). Globally cannabis is probably the most pervasive and commonly used illicit drug (Saxena & Donoghoe).

In the Smart and Liban (1980) study it was found that in the adult sample (aged 18 years and older) cannabis was by far the most commonly used drug with 23.5% having tried it at sometime in their lives compared with only 5.3% having tried an hallucinogen, the next most prevalent drug. Most other drugs had been taken illicitly at least once by fewer than 3% of the sample. Only cannabis was used to any extent in the year prior to the study (9.7%) or in the month prior to the study (5.2%) (Smart & Liban).

In a study conducted with respondents from Munich Germany aged 14-24 years of age results indicated that Cannabinoids were by far the most frequently used type of drug, followed by various stimulating drugs and hallucinogens (Perkonigg, Roselind & Wittchen, 1998). 6.5% of the sample reported having used cannabis once, 11% reporting infrequent use (2-4 times in their life) and 15.5% regular use (having used cannabis more than four times) (Perkonigg, et al., 1998). This concurs with the results of the current study that found that cannabis was the most frequently used illicit drug amongst the university students. However the current study found that 50.3% of the sample at least tried cannabis once, with 66.96% of those people having used it in the past year and 37.72% of those having used it in the month prior to the study, most on 1-5 days (24.565%). This indicates a much higher usage rate than in the Munich study (Perkonigg

et al.). What the Munich study's findings revealed was that substance use is quite prevalent among adolescents and young adults with 40% of men and 30% of women having tried some drug at least once in their life (Perkonigg et al.).

Cannabis Use and Degree Year

The lifetime usage of cannabis was higher for fourth year students (62.55%) than first year students (42.20%) as a percentage of the degree year sample. . . More first year students (69.36%) have used cannabis in the year prior to the study when compared with fourth year students (64.20%), however more fourth year students have used cannabis in the 30 days prior to the study (41%) compared to first year students (36.67%). In South Africa, the use of narcotics such as cannabis ("dagga" as it is termed locally) is exceptionally high (Substance abuse in, 2001). From 1995-2000 1,818,858 kilograms of cannabis was seized in South Africa (UNOCP, as cited in Gastrow, 2003).

A study examining the rates and patterns of cannabis and other illicit drug use among different types of students and colleges in 1999 and changes in use since 1993 concluded that the use of cannabis and other illicit drugs across the United States in all types of colleges had increased since 1993 (Gledhill-Hoyt, Lee & Wechsler, 2000). The author recommends that a longitudinal study be conducted with UCT students to gauge whether cannabis use is on the rise.

Comparing Alcohol, Tobacco and Cannabis Use

There has been a significant increase in the use and abuse of alcohol and other drugs among young South Africans (Peltzer & Phaswana, 1999). Many adolescent substance abusers in South Africa start with alcohol abuse and progress quickly to the abuse of other drugs (Hoberg, n.d.). In response to this increase and rapid progression a study on the prevalence, patterns and experiences of drug use (especially alcohol and cannabis) among South African University students at the University of the North was conducted (Peltzer & Phaswana).

The results from this study indicated that alcohol, cigarettes, glue and cannabis were the four most prevalent substances abused. The majority of respondents reported that their first experience of alcohol and cannabis was at age 17 or older (Peltzer &

found that 37.72% of the sample had reported past month usage of cannabis, which is significantly higher than the 17.2% that was found in the Shillington and Clapp study.

In the current study the chi square statistic for past month alcohol use and past month cannabis use was 32.84806 (df=16) and p=. 00775 signifying that these two variables are strongly associated. This statistic indicates that there could possibly be a problem of poly substance use (cannabis and alcohol use) on UCT campus, with 81 cases reporting using both alcohol and cannabis in the month prior to the study. What is interesting to note is that in the Shillington and Clapp (2001) study all those students who reported past month cannabis usage also used alcohol in the same 30-day period, only 227 cases could be classified as alcohol only users, with 47 cases being classified as poly substance users. A study that looked at cannabis use and alcohol problems among adults and students found that alcohol problems in both samples were the best predictors of cannabis use (Smart & Liban, 1980).

In the current research it was found that alcohol was the most prevalent substance of use in the sample, followed by tobacco, then cannabis and than other illicit drugs (amphetamines and MDMA/Ecstasy.). This correlates directly with a study that looked at patterns of alcohol use, cigarette smoking, and other substance use among Chinese University Students in Hong Kong. In this study alcohol use (current and past) was reported as the most used substance (61%), tobacco (13%), cannabis (2%), and other illicit drugs (0.4%) (Abdullah et al., 2002).

In the current study, fourth year commerce students were higher in their lifetime tobacco usage, whilst first year commerce students were higher in their more recent usage of tobacco products (past year and past 30 days). In the study that assessed binge drinking among undergraduate college students in the United States and its implications for other substance use it was found that the more the undergraduate students binge drank, the more likely they were to report lifetime and current use of cigarettes and cannabis (the next most prevalent drugs in the current study) (Jones et al., 2001).

The mean age of first tobacco usage in the author's sample is 15.21 years of age, right in the middle of adolescence. This could be a risk factor for future substance use disorders as according to Lewinsohn, Rohde and Brown (1999), having ever been an adolescent cigarette smoker substantially increased the risk of developing a diagnosis of alcohol, cannabis and hard drug abuse/dependence by young adulthood in their sample.

In a study that assessed level of current and past adolescent cigarette smoking as predictors of future substance use disorders in young adulthood, it was found that life time smoking among older adolescents significantly increased the probability of future alcohol, cannabis and hard drug use disorders and daily smoking was associated with an increase risk in future cannabis, hard drug and multiple drug use disorders (Lewinsohn et al., 1999). The study concluded that early smoking onset age is a risk factor for future substance use disorders (Lewinsohn et al.).

In the current sample, hard drugs such as cocaine, and heroin etc were found to have no association with tobacco usage. AODs used and abused in South Africa can roughly be divided into three categories, those that are extensively used, those that are moderately used and those that are less frequently used (Parry, 1998; The Drug Advisory Board, 1999). Hard drugs such as crack cocaine, cocaine powder, heroin, speed, lsd, hashish and ecstasy are classified as moderately used drugs. In the last (less frequently used) category one finds drugs such as opium, rohypnol, ketamine and wellconal (Parry). This shows that "hard drugs" are not considered a major problem as of yet in South Africa as they are not classified as extensively used drugs and the current sample corresponds with this as hard drugs were not found to be prevalently used.

Other drugs: Amphetamines/Stimulants and MDMA/Ecstasy

Amphetamine/Stimulant Use and Students

Illicit amphetamine/stimulant usage in this report refers to amphetamine/stimulant usage without the permission or without a prescription from a doctor.

Illicit amphetamine/stimulant usage arose as the next most prevalent substance of use amongst the sample, after cannabis, with 16.02% of the respondents having at some stage used amphetamine/stimulants without the permission of a doctor, with 51.38% of those respondents having illicitly used amphetamines in the past year and 28.37% of those respondents having illicitly used amphetamines in the past 30 days. Of the 28.37%, the majority illicitly used amphetamines on 1-5 days and on 20 or more days in the past month (12.28%) The mean age of the respondents when they first illicitly used amphetamines was 18.37.

Although there is considerable research on substance abuse among university students (Prendergast, 1994), there is only limited research and data available on the illicit use of prescription drugs among college students (Graff Low & Gendaszek, 2002). Since there are an increasing number of amphetamine prescriptions for attention deficit-hyperactivity disorder in older adolescents, non-medical use seems more likely to occur (Graff Low & Gendaszek).

In the Munich study mentioned earlier, following cannabis the next two most frequently used types of substances by the Munich sample were stimulants, either of the amphetamine type or cocaine products and then hallucinogens (Perkonigg et al., 1998). In the current study following cannabis, illegal (without a prescription from a doctor) amphetamine/stimulant usage arose as the next most prevalent substance of use.

Amphetamine/Stimulant Use and Degree Year

More fourth year students (22.01%) have illicitly used amphetamines than first year students (11.95%) and of those students who have used amphetamines without a doctors recommendation more first year students (60%) did so in the past year than fourth year students (43.86%). Of those who had used amphetamines in the past year without a doctor's permission, more fourth year students (46%) did so in the month prior to the study than first year students (25.81%). This could be due to final year exam pressure and the need to be aware and awake in order to study. This result is dissimilar to the study of Scottish nursing students that found that the only significant difference is first and fourth year drug use was with regards to amphetamines and stimulants, with more first years taking stimulants than fourth years (Engs & Rendell, 1987).

A study that surveyed undergraduates at a small college in the US on their use of both legal and illegal stimulants found that approximately a third of the undergraduate college students surveyed (150 students were sampled) reported illicit use of prescription drugs (legal stimulants), with male students reporting higher usage than women (Graff Low & Gendaszek, 2002). In the current study on 16.02% of the first year students (undergraduates) had illicitly used amphetamines/stimulants, a much lower number than in the above study.

MDMA/ecstasy usage arose as the third most prevalent illicit substance used in the sample, with 12.76% of the sample having tried ecstasy at some stage, with 57.47% of those having used ecstasy in the past year and 17.65% of those students, having used ecstasy in the month prior to the study. 13.73% of the students who used in the month prior to the study used on 1-5 days. In the Texas study it was found that ecstasy usage was also low with only 8% of the sample reporting using ecstasy, with 1% of those students using in the month prior to the study (Kerber & Wallisch, 1997). Even though the ecstasy usage of the students at the Cape Town based university was lower than cannabis and amphetamines, it is sill higher than the Texas ecstasy results.

Ecstasy is often known as a club drug (Dawn Report, 2002; Hoberg, n.d.; Terblanche, 2002). "Club drugs" refer to a wide variety of drugs used by the youth at clubs and at rave parties, including ecstasy or MDMA and dagga (Pretoria News, 2001 as cited in Hoberg). The trend in drug consumption in South Africa varies from area to area and population group to population group, with these so called "club drugs" namely dagga and ecstasy and alcohol being favoured most by the current youth of South Africa (Hoberg). Ecstasy is also known as a recreational, elite, designer drug (Hoberg). The fact that ecstasy is considered an elite, designer drug could be the reason why the ecstasy usage in the current sample is lower than cannabis, as due to its status is probably more expensive, than the locally cultivated cannabis.

Club drugs are seldom used alone, and are consumed together with other drugs such as dagga and alcohol (De Miranda, 1998, as cited in Hoberg, n.d.). The chi-square statistic for ecstasy and alcohol usage has a significance level of p=. 0024. This indicates that there is a significant relationship between usage of alcohol and usage of ecstasy among the current sample. Cannabis usage correlated with ecstasy usage derived a significance level of p=. 0000, indicating a strong association between the respondent's usage of cannabis and ecstasy. What there statistics show is that amongst the sample it is probable that those who use ecstasy also use dagga and/or alcohol.

Of those students in the current study who said that they had tried ecstasy at some time in their lives, more first year students (undergraduate) (67.57%) used ecstasy in the past year than fourth year students (Postgraduate) (51.02%). This result correlates with a study that surveyed undergraduates at a small college in the US on their use of both legal and illegal stimulants (Graff Low & Gendaszek, 2002). This study found that 34% of the sample reported using illegal stimulants such as cocaine or MDMA (Ecstasy, 3, 4, methylene dioxy N-methyl amphetamine) in the year prior to the study (Graff Low & Gendaszek). The author's results show that 57.47% of those who said that they had tried ecstasy had used it in the year prior to the study (Graff Low & Gendaszek).

The same study also found that approximately a third of the undergraduate college students' surveyed reported illicit use of prescription drugs (legal stimulants) (Graff Low & Gendaszek, 2002). Even though ecstasy usage in the sample is low in comparison to amphetamines and cannabis usage, it is still significant and should not be overlooked as according to Strote, Lee and Wechsler (2002) it could lead to use and abuse of other substances.

In a study that examined the prevalence and changing patterns of ecstasy use among college students it was found that the prevalence of past year ecstasy use rose from 2.8% to 4.7% between 1997 and 1999, which indicated an increase of 69% (Strote et al., 2002). Ecstasy users in the sample (nationally representative sample of over 14 000 college students at 199 U.S four-year colleges) were more likely to use cannabis, engage in binge drinking and smoke cigarettes (Strote et al.). The authors concluded that ecstasy use is a high-risk behaviour among college students, which has increased, rapidly in the past decade (Strote et al.). The current study found strong associations between tobacco and ecstasy, alcohol and ecstasy and cannabis and ecstasy indicating that a strong relationship exists between the use of ecstasy and cannabis, alcohol and tobacco. Please refer to tables B70, B75 and B78 in Appendix B.

The above section has focused on prevalence of substance use amongst a Cape Town based university sample. Alcohol, tobacco and then cannabis were the three main substances of use amongst the sample. Following that was illicit amphetamine usage and MDMA/Ecstasy usage.

The following section concentrates on questions relating to university rules and policies. The students were asked to answer yes, no, do not know to certain statements pertaining to UCT.

STUDENT PERCEPTIONS OF UCT'S ROLE IN MANAGING SUBSTANCE USE

Policies on Substance Use at UCT

Major factors influencing alcohol use, as peer pressure (especially among young persons), availability of alcohol, poor social conditions, boredom, a lack of social controls to deal with those misusing alcohol and societal attitudes in general all contribute to the use and abuse of alcohol in South Africa (Parry, 1998). With regards to social controls i.e. policies and rules that control the use of alcohol at UCT, 41.75% of the sample did not know whether UCT has a formal policy on alcohol and drug use. At this time UCT does not have a formal policy on alcohol and drug use. 56% of the sample stated that they would not support a policy that stipulated no drinking of alcohol at UCT events and 39% of the sample said that they do not think UCT is responsible for dealing with substance abuse amongst its students. 28% of the sample were not sure whether UCT was responsible for dealing with substance abuse amongst its students and 32% of the sample said that yes they do think UCT is responsible for dealing with substance abuse amongst its students. This information shows that the majority of students surveyed do not support social controls that will aide in dealing with alcohol use and misuse on UCT campuses.

However, when asked whether they felt a formal policy on alcohol/drug usage at UCT is necessary 76.79% of the sample felt that it was, with 83% saying that UCT should have a policy on illegal substances and 73% saying that UCT should have a policy that dealt with legal substances. This is contradictory to the previous finding. However when asked if they would support a policy that would not allow drinking at UCT related events 56% said they would not support such a policy. So even though a vast majority of the students think that UCT should have policies on legal and illegal substance use they would not necessarily support them, especially with regards to alcohol use at UCT events. This is interesting as the majority of students think a formal policy on licit substances is necessary at UCT, yet would not support such a policy when it came to UCT events. In the Texas study approximately 90% of all students surveyed said they would support their

university if it were to require the offering of non-alcoholic beverages at university events, if it were to make the rules regarding alcohol clearer and if it were to provide more alcohol free events (Kerber & Wallisch, 1997).

UCT's Rules on Alcohol

When the students were presented with statements regarding alcohol at UCT, 45.85% said that UCT does allow alcohol on its premises, 30.86% said that UCT did not allow alcohol on its premises and 22.7% said that they were not sure. UCT does in fact allow alcohol on its premises. When asked whether they were allowed to carry alcohol and drugs while on UCT campus 21.25% said they did not know, 65.82% said they were not allowed to and 12.18% said they were allowed to carry alcohol and drugs while on UCT campuses. Another statement, which said that UCT provides alcohol free food facilities, 79.94% said yes, 5.35% said no and 14.41% said that they do not know. What this information shows is that the majority of students do know UCT rules and policies around alcohol on its campuses. This could only be a phenomenon of the commerce faculty. However, it is definitely suggested from the results that more work needs to be done on making students aware of UCT's rules and policies with regards to substance use.

Extent to Which It Is Easy/Difficult to Get Certain Substances on UCT Campuses

When the students in the current sample were asked the extent to which they found it easy or difficult to get alcohol on UCT campuses, the mode was very easy and the frequency of the mode was 267 (39.627% of the sample). This question was assessed on a five point likert scale ranging from very difficult to very easy. The fact that students found it very easy to get alcohol on UCT campuses correlates with research that says that access to alcohol in South Africa is exceptionally easy (Strachan, 1999) and there is one liquor store outlet for every 190 people in this country (Substance Abuse, 2001).

When the sample was asked the extent to which they found it easy or difficult to get cigarettes on UCT campuses, 517 (76.71%) said that it was very easy. Please refer to Appendix B for a more detailed analysis of the extent to which student found it easy/difficult to get certain substances on UCT campuses.

Information Received From UCT

When the students were asked if that had received any information from UCT about how one recognizes someone with a drinking problem, 77.6% of the sample said that they had not received any information. Of those who had received information 51% found it helpful and 30% found it neither helpful nor unhelpful. When asked whether UCT is doing enough to address the issue of substance abuse amongst its students 44.13% said no, with only 13.08% saying yes. This result is substantiated in further results that found that 341 students (51%) were not sure if UCT had alerted its members to the problems of substance abuse. This highlights again that students do not know what UCT is doing or if UCT is doing anything to address the problem of substance abuse amongst its students. Of those who said that UCT has alerted its members to the problems associated with substance abuse, 76 students had been alerted by posters, 31 by seminars, 4 by letters and 7 by other means (i.e. orientation week). This has major implications for policy on prevention initiatives as it highlights that if indeed problems associated with substance abuse is being discussed in orientation week, then it is not being done so effectively as only 7 students had received information this way, that is 0.017% of the first year sample.

78.93% of students said they had not received any information on long-term health effects of alcohol/drug use. In the Texas study fewer than half of all students had received information from their universities about the dangers of drinking, with 41% having received information on the long-term health effects of heavy drinking compared to the current sample of only 21.97% having received any information regarding the long term health effects of heavy drinking, and 40% having received information about how to recognise someone with a drinking problem compared with the current sample of 22.4% who had received information regarding how to recognise someone with a drinking problem (Kerber & Wallisch, 1997). What does this say for the university's responsibility towards its students? Are universities in-fact responsible for substance abuse problems amongst their students?

When it came to questions around spot checks on UCT 23.63% of the sample felt it was necessary to spot check/test people compared to 56.91% who felt it wasn't necessary, 47.17% would have objections to spot checks and 43.75% would have no

objection, 83.95% of students said they would not be worried of exposure if UCT does do spot checks.

It is evident that UCT students do not know about UCT services and prevention initiatives aimed at addressing substance abuse amongst its students. According to the literature although there has been an explosion of substance abuse prevention and education initiatives on university campuses in the past few years, most of these go unevaluated and lack a theoretical perspective to help define and interpret relevant and useful information (Cummings, 1997).

From the results, it is apparent that there is a lack of information being circulated to students and in order for any UCT substance abuse initiative to work there needs to be pervasive dissemination of information to students. Before UCT can adopt a model of any kind whether it be a social marketing model or generalised alcohol and other drug awareness efforts in the form of media events, workshops, orientation programs etc (Cummings, 1997) information regarding Students awareness levels and perceptions needs to be collected and analysed and students need to be made aware of UCTs policies re illegal and legal substance use and abuse and any services that UCT has to offer in aide of problems that may arise due to excess drinking or substance abuse. Only 15.727% of students were aware of a substance abuse policy at UCT. 19.58% of students were aware of counselling services offered to students re substance abuse, 15.28% were aware of prevention programmes and 12.46% were aware of drug rehabilitation referrals. At the present time UCT does not have a policy that deals with alcohol and/or drug use and abuse on its campuses.

SUMMATION

Over the past 10 years South Africa has experienced a political transformation that has captivated world attention (Maiden, 2001). It has become a sought after tourist destination and has attracted much foreign investment (Maiden). Ironically, it is also emerging as one of the most lucrative countries for drug trafficking, dramatically increasing alcohol and other drug abuse (Maiden). One of the by-products of the apartheid-induced isolation was a reduced exposure of South African youth to drugs. Since the opening of the country's borders to the rest of the world, there has been an inundation of drugs (Maiden; Ryan, 1997) and South Africa is a gateway for international

CHAPTER 5
RECOMMENDATIONS FOR FUTURE RESEARCH AND CONCLUSIONS

RECOMMENDATIONS FOR FUTURE RESEARCH

General Recommendations

The author recommends that future research investigate the relationship between prevalence of substance use amongst students at universities across South Africa and demographic variables such as culture, socio-economic status, family status and race.

The author recommends that future research examine the relationship between university culture and substance use patterns at different universities across South Africa in order to determine whether the ethos and culture of a university influences the prevalence of substance use amongst its students.

There has been much research on the topic of binge drinking at American Universities and since alcohol arose as salient in the current research, the author recommends that the American studies on binge drinking be replicated at South African universities in order to fully understand its nature and implications for university policy.

The author also recommends that continual research into the use of club drugs (MDMA/ecstasy) and other illicit substances are the focus of university research, as the literature states that these substances are on the rise in Cape Town and amongst South African youth in general.

The Harvard School of Public Health College Alcohol Study (CAS) (2003) is a longitudinal study that collected data on all areas of alcohol use and abuse from over 114 American universities, the results showed that there was a significant increase in the use and abuse of alcohol amongst university students from 1993 (the first year of the study) to 2001 (the most recent year of the study). This kind of information is extremely useful for university administrators and health care service providers. Unfortunately the current study is a cross sectional study and hence does not provide the type of information that is provided by the CAS study. The author therefore recommends that longitudinal research be done that looks at substance use patterns overtime.

Practical Recommendations for the Institution

The author recommends that future research be conducted in the area of alcohol use and abuse amongst students across faculties. This will allow university administrators to perform a cross faculty analysis to see if alcohol use is a university wide phenomenon. This research should then feed into policy development and implementation.

Alcohol abuse should be a primary focus of prevention and intervention programs. The author recommends that more research be conducted into the need for policy development and policy implementation.

The author recommends that the institution design and implement policies on substance use amongst its students on its campuses and at university related events. Policies should include educational awareness initiatives as well information dissemination.

This research provided information on prevalence of student use and suggests that the results be incorporated into educational programmes, which provide direct, ongoing feedback to students about their own behaviour (Berkowitz, 1994). Information on prevalence rates can be integrated into symposia, classes and media presentations and can be used to create outreach programs tailored to the specific needs and use patterns of students at UCT (Berkowitz).

CONCLUSIONS

The research study has shown that there is validity in attempting to understand student's experiences of substance use. The first and fourth year commerce students were chosen as a lens through which substance use in the whole commerce faculty could be viewed.

The literature review revealed that substance use especially alcohol, tobacco and cannabis use at South African universities and in South Africa in general is high and that the use of those substances and others such as MDMA and heroin are on the rise in cape Town.

This study was therefore undertaken to expand our knowledge with regards to the nature and extent of substance use at the University of Cape Town. This knowledge will be used to increase our understanding of students substance use enabling us to manage it more competently. A literature search was conducted in order to familiarise the researcher

with the prevalent types of substances used and abused by students. A self-report standardised questionnaire was utilised to achieve the above aims and proved to be very successful as a means of exploring the experiences and perceptions of the respondents in the sample.

From the research findings it is evident that alcohol use is a prevalent phenomenon amongst commerce students, with tobacco and cannabis use being the next most frequently used substances by commerce students. There was no significant relationship found between gender and alcohol use, contradictory to previous research, which stated that male students tend to drink much more than female students.

The three illicit prevalent substances of use and abuse amongst the sample were cannabis, amphetamines/stimulants in the form of dietary supplements and speed and MDMA/ecstasy.

It can therefore be concluded that the most prevalent substance of use amongst the sample was alcohol, with 95% of the sample having at least tried alcohol at sometime in their lives. However the study has indicated that tobacco and cannabis are also frequently used and is a cause for concern. The extent to which amphetamines/stimulants and MDMA/ecstasy was used amongst the sample, indicates that it is not a prevalent substance of use amongst the sample, however literature states that the use of these substances in Cape Town, specifically, is on the rise. It is with this in mind that the findings of this research have signaled several recommendations for future research including researching around binge drinking and the use of illicit substances amongst students. The latter forming part of continual research, documenting evidence to in fact see if the use of illicit substances is on the rise amongst Cape Town students.

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APPENDIX A
CLARIFICATION OF TERMS AND SUBSTANCES OF USE AND ABUSE

Appendix A: Clarification of terms and substances of use and abuse

Clarification of Terms

Substance Abuse and Dependence

In the literature it was found that when researching alcohol or drug use, distinguishing between use, abuse and dependence were essential. According to the National Institute of Medicine (2003) use is defined as the taking of alcohol or drugs, abuse is defined as any harmful use of alcohol or drugs and dependence is defined as addiction (Boggan, 2003). The Diagnostic and Statistical Manual of Mental Disorders 4th Edition, (DSM IV) (1994) provides a distinction between abuse and dependence. This literature review will concentrate on that distinction.

Substance use is a precondition and contributor to substance abuse and dependence (US Congress, 1994). One cannot become dependent on a substance without first using it, continuing its use and passing through stages of progressively more serious use (US Congress). These patterns of progression from use to abuse to dependence are not the same for all individuals. They vary widely depending on several individual and contextual factors (US Congress).

Substance dependence had been well studied, yet the progression from use to abuse to dependence has not been adequately researched, except in the case of alcohol (US Congress, 1994). All people who end up with abuse, harmful use or even dependence begin with use. Use of a substance, whether licit or illicit, does not represent a substance use disorder even though it may be unwise and strongly disapproved of by friends, family, employers or society. Use by itself is not considered a medical disorder (US Congress). For a disorder to be present, use must become something else e.g. occur more often, occur at higher doses, or result in the magnitude of problems. There is little data available to clearly point out where the border between use and abuse/dependence lies (US Congress).

Substance abuse and dependence are complex phenomena that defy simple explanation (US Congress, 1994). A complex interaction of factors contributes to a person seeking out, using and perhaps subsequent abusing of and dependence on drugs (US Congress). In the literature substance abuse or substance dependence is understood as

the prolonged, compulsive and pathological use of mind-altering substances such as medication, non-medically indicated drugs (called drugs of abuse) or toxins despite personal, physical or social problems caused by the substance use (Ford-Martin & Odle, 2002; Pham-Kanter, 2001; DSM IV, 1994).

Abuse may lead to dependence, where the patient's tolerance for the drug increases and where an increased amount of the substance is needed to attain the desired effects or levels of intoxication (Ford-Martin & Odle, 2002). There are ongoing debates in the literature and medical world on the exact distinctions between substance abuse and substance dependence. The current practice-standard differentiates the two by defining substance abuse in terms of the social consequences of substance use and substance dependence in terms of physiological and behavioural symptoms of substance use (Pham-Kanter, 2001; DSM IV, 1994).

Substance abuse is any pattern of substance use that results in adverse social consequences related to drug taking e.g. failure to meet social, family or work obligations, legal problems or interpersonal conflicts (Pham-Kanter, 2001; Health Dictionary, 2004; American Medical Association, 1999; Timmons & Hamilton, 1990). Substance abuse can also be defined as substance related problems but without dependence (Westermeyer, 1986). Substance abuse is the irregular excessive use of drugs unrelated to acceptable medical practice (The Drug Advisory Board, 1999). Substance abuse is characterised by frequent relapse or return to the abused substance and substance abusers often make repeated attempts to quit before they are successful (Asenjo, 2001).

Substance dependence is a phenomenon whereby a person becomes physically and/or psychologically addicted to a substance (Ford-Martin & Odle, 2002; American Medical Association, 1999; The Drug Advisory Board, 1999). Substance dependence is commonly known as addiction, which is defined as dependence on a behaviour or substance that a person is powerless to stop despite the negative social, physical and legal consequences (Asenjo, 2001; Ford-Martin & Odle; DSM IV, 1994).

Classic addiction is understood to mean that when a person takes certain substances in sufficient quantity over a sufficiently long time, and then stops taking them abruptly, the person will experience a set of physical symptoms known as withdrawal that include chills, fever, diarrhoea, nausea, vomiting, cramps and aches and pains in the bones and joints. (Goode, 1989, as cited in Isralowitz & Telias, 1998). The United Nations International Drug Control Programme (2000) defines withdrawal as the

individual symptoms of, or the overall state (or syndrome) that may result when a person stops the use of a particular psychoactive drug upon which they have become dependent or after a period of repeated exposure. Withdrawal states and symptoms occur in degrees as a direct result of the frequency, intensity and recency of drug use (United Nations International Drug Control Programme).

Addiction results from an incessant need to combat the negative side effects of a substance by returning to that substance for the initial enhancing effects (Gale Encyclopaedia of Science, 2001). Addiction is characterised by physiological and behavioural symptoms related to substance use (Pham-Kanter, 2001). Symptoms include the need for increasing amounts of the substance to maintain desired effects, withdrawal if drug-taking stops and an excessive amount of time spent on activities related to substance use (Pham-Kanter; Ford-Martin & Odle, 2002; DSM IV, 1994; New York Online Access to Health (NOAH), 1999). Substance abuse is more likely to appear amongst those people who have just started drug taking and is often an early symptom of substance dependence. However substance dependence/addiction can appear without substance abuse and substance abuse can continue for extensive periods without a shift into substance dependence (Pham-Kanter).

Availability is a precondition for drug abuse or drug dependence. A person cannot become a drug abuser unless a drug is readily available to be used (US Congress, 1994). Availability of drugs is often thought of as the mere physical presence of a drug. However, availability is affected by social norms (social availability), prices (economic availability), and personal values (subjective availability). (US Congress).

Substances of Use and Abuse

A drug is any substance that modifies the functioning of mind and/or body (Hanson, Venturelli & Fleckenstein, 2004). A psychoactive substance is any substance that people take to alter either the way they feel, think or behave (Thinkquest, 2001; United Nations, 2004; Wikipedia, 2005). Psychoactive drugs are substances that affect the central nervous system and change perceptions and/or consciousness (Hanson et al., 2004). Psychoactive drugs are often used for recreational and spiritual purposes and also for medicinal purposes in treating psychological and neurological illnesses (Wikipedia). In the past most drugs were made from plants such as the opium poppy for heroine, coca

bush for cocaine and cannabis plant for marijuana and hashish. Today, drugs such as ecstasy and LSD are made by synthesising a number of chemicals, (United Nations). Only psychoactive substances that affect the brain pleasure pathway will lead to substance abuse or dependence (addiction) (Annenberg/CPB, 2004; Handout 1, 2005; McGraw-Hill, 1997; Mathias; 1997). These substances include alcohol, tobacco, narcotics e.g. cocaine, depressants and stimulants (Hanson et al.; Mathias). Substances like antidepressants, lithium and anti psychotic medication do not lead to substance abuse or dependence (Haddad, 1999; Handout 1; Suarez, 2004).

Psychoactive substances of abuse are classified as either illicit or licit (Hanson et al., 2004). The former refers to a psychoactive substance such as marijuana, cocaine and LSD, the production, sale or use, of which is prohibited, whilst the latter refers to substances that are legally available either with or without a medical prescription such as coffee, alcohol and sleeping pills (The Drug Advisory Board, 1999). A drug listed in the schedules of the international drug control conventions can only be called an illicit drug if its origin was illicit. If the origin was licit, then the drug itself is not illicit but only its production, sale or use in particular circumstances is illicit (United Nations International Drug Control Programme, 2000).

A wide range of substances can be abused. The most common classes include: alcohol, cocaine-based drugs, opioids (including prescription pain killers and illegal substances such as heroin), benzodiazepines (e.g. valium), sedatives or "downers" (e.g. tranquilisers), stimulants or "speed" (e.g. amphetamines and ecstasy), cannabioid drugs (e.g. marijuana and hashish), hallucinogenic drugs (e.g. lsd and pcp) and inhalants (e.g. paint thinner, glue, and gaseous drugs used in medical practice of anaesthesia) (Ford-Martin & Odle, 2002; Dimoff, 1999; National Institute On Drug Abuse, 2002; Schlaadt & Shannon, 1994; Emmet & Nice, 1996). Other drugs of abuse include nicotine and tobacco, anabolic steroids, caffeine and psychiatric drugs (Levinthal, 1996, 1999).

Legally available drugs include alcohol, prescribed medicines, inhalants and over the counter medicines such as cough syrups and diet medications (Clinical Reference Systems, 2001; Hanson et al., 2004). Illicit drugs include marijuana LSD, PCP, Opiates, cocaine, crack and designer drugs such as ecstasy (Clinical Reference Systems; Hanson et al.). Illicit drugs of abuse fall into three categories stimulants (crack, cocaine), depressants (heroin, barbiturates) and hallucinogens (marijuana, ecstasy, LSD) (United Nations,

2004). The literature has identified cocaine, marijuana and alcohol to be the substances most pervasively abused by university students (Prendergast, 1994).

Universities are microcosms of the greater societal structure of a country and hence the need to provide an epigrammatic depiction of the national situation of substance use and abuse in South African society, which is outlined in the subsequent section. Following that substance use and abuse at universities will be examined.

The following section briefly describes cannabis, cocaine and alcohol, as they are three drugs that have evolved from the literature as being extensively abused by students.

Cannabis

Cannabis is a generic term to indicate the several psychoactive preparations of the plant called Cannabis Sativa (World Health Organisation (WHO), 1997). Cannabis is often called marijuana, pot, grass, reefer, weed, dagga, herb, mary jane or mj, is a mixture of dried shredded leaves, stems and seeds from the hemp plant, cannabis sativa (Delong, 1972; Dimoff, 1999; Levinthal, 1996; NIDA, 2002; UN Scientific Section, 1998). The psychoactive ingredient is delta-9-tetrahydrocannabinol (THC) (WHO). The amount of THC in marijuana determines its potency (Schlaadt & Shannon, 1994). Marijuana can be smoked in cigarettes, pipes or through a broken bottleneck; it can also be eaten or drunk in tea (Dagga, no date; Emmet & Nice, 1996).

Marijuana is technically classified as a hallucinogen, but is usually categorised on its own as its effects are remarkably different to those of other hallucinogens (Delong, 1972; Dimoff, 1999). Marijuana is regarded as a relaxant or mild hallucinogen and has been used by mankind for over 6000 years (Gastrow, 2003). Marijuana is relatively inexpensive (Schlaadt & Shannon, 1994). The immediate physical effects of marijuana on man are mild (Delong, 1972). The general effect of marijuana is a subtle mood change, which is not easily noticed by the novice (Delong). Other effects of the use of marijuana include relaxation, happiness, a loss of inhibitions, an increase in an appetite and extreme talkativeness (Emmet & Nice, 1996; UN Scientific Section, 1998). One pertinent effect of marijuana is the enhancement of the senses (Delong). Sensitivity to colours, sounds, textures, taste and patterns is greatly enhanced with the use of marijuana (Delong).

Significant adverse reactions to cannabis are rare, but do occur. These reactions are more common when stronger forms of cannabis are used, such as hashish. There are

four types that may result: simple depression (the mildest and most common reaction), a panic state, toxic psychosis and a psychotic breakdown (Delong, 1972). Other adverse effects of marijuana use include distortion of time, distance and speed (affecting ones driving ability, especially at night), impairment of short-term memory, the ability to concentrate, make sound judgements and coordination, increased heart rate, watery red eyes, and paranoia (Dagga, no date; Dimoff, 1999; Emmet & Nice, 1996; Levinthal, 1996, 1999; NIDA, 2002; Schlaadt & Shannon, 1994). The same from a cannabis "cigarette" has been shown to contain 50% more tar than a high-tar cigarette; with regular use, risk of lung cancer, chronic bronchitis and other forms of lung disease increases (United Nations (UN) International Drug Control Programme, 2000; UN Scientific Section, 1998). Cannabis/marijuana appears to have the unusual property of "reverse tolerance", in that regular uses of the drug are more sensitive to the drug than novices, needing less to achieve the desired state of a "high" (Delong).

A great concern regarding the effects of marijuana deals with the extent to which marijuana abuse leads to greater incidence of drug abuse in general, an assertion that is often referred to as the gate-way hypothesis (Levinthal, 1996). The gateway hypothesis in general terms asserts that the use of certain substances such as marijuana increases somewhat the chances of progression to the use of other more harmful and illegal substances (US Congress, 1994; Witton & Mars, 2001). The gateway theory does not try to determine drug progression, but is simply about access to choices and closeness to drugs (Witton & Mars). There is evidence to suggest that because cannabis and other harder drugs such as heroin and cocaine have like effects on the brain, cannabis may act as a gateway to those harder drugs (Marijuana: Harder than thought, 1997, as cited in Calvert, Bainbridge, Hotonu & Dobson, 2002). Statistically, the evidence is overwhelming and undisputed; marijuana's users are more likely in their lifetimes to use a wide range of illicit drugs including cocaine (Levinthal). The earlier a person engages in marijuana use and the greater frequency of that use, the greater the likelihood of that person becoming involved in other drugs in a serious way. There facts are unquestioned (Levinthal).

Cocaine

Cocaine also known as coke, snow, "c", Charlie, nose candy and gold dust (Cocaine, no date; Dimoff, 1999) is a powerfully addictive central nervous stimulant that directly affects the brain (NIDA, 1999). It is the most popular stimulant and one of the most powerfully addictive drugs (Dimoff). Cocaine users may often rapidly develop both a psychological and physical dependence on the drug (Emmet & Nice, 1996; Schlaadt & Shannon, 1994). Cocaine stimulates the central nervous system by increasing heart and respiratory rates and elevating blood pressure, which result in feelings of alertness, high energy and insomnia (Dimoff). Cocaine is described as the most psychological dependence producing substance (Cocaine, no date). Acute toxic reactions may occur in both the naïve experimenter and the long-term cocaine user (United Nations (UN) International Drug Control Programme, 2000). These acute toxic reactions include a panic-like delirium, high blood pressure, seizures and cardiac arrhythmia (United Nations (UN) International Drug Control Programme).

Cocaine is generally sold on the street as a fine, white, crystalline powder that is snorted through the nose (Emmet & Nice, 1996; NIDA, 1999). Cocaine can also be injected intravenously (Emmet & Nice; Levinthal, 1996). Use of cocaine may cause seizures, cardiac arrest, respiratory arrest or a stroke (Dimoff, 1999). Cocaine dependence is an expensive habit and often the addict loses everything because of his/her addiction (Dimoff).

After powder cocaine is snorted it is absorbed through the blood vessels in the nose. It then travels through the blood stream and eventually enters the heart where it is pumped to the brain. Once in the brain it produces a powerful euphoria or a "high feeling" (Dimoff, 1999; Levinthal, 1996; NIDA, 1999). This high can last from 20 to 40 minutes (Dimoff). Once snorted the user gets an orgasmic rush, then becomes exceptionally energetic and alert with no need for food or sleep (Dimoff; Emmet & Nice, 1996; NIDA, 1999; Schlaadt & Shannon, 1994; Trad, 1994). The user becomes talkative, peaceful, self-confident and in command, however when the drug starts to wear off the user becomes irritable, agitated, anxious and unhappy (Dimoff; Levinthal).

Symptoms of withdrawal from cocaine include depression, anxiety and panic (Dimoff, 1999; Emmet & Nice, 1996). Physical signs of possible cocaine abuse include, dilated pupils, increased heart rate and irritability, paranoia, sneezing and irritability in the

nose (if cocaine has been snorted), depression, insomnia and decreased appetite coupled with significant weight loss (Levinthal, 1996). It is possible to overdose fatally on cocaine (Emmet & Nice).

Alcohol

Depressants or "downers" slow down or depress the central nervous system producing a calming effect or sleep; alcohol is probably the best known depressant (Dimoff, 1999). Alcohol is the most commonly abused substance in the world (Alcohol, 1999; Dimoff; Schlaadt & Shannon, 1994). Alcohol is a drug and should be analysed in the same terms as other drugs (Delong, 1972). The common distinction between alcohol and other drugs of abuse (AODs) is based on the fact that alcohol is known and accepted in many cultures, whilst AODs are not accepted (Delong). It is entirely possible that alcohol is inherently more dangerous than most other drugs of abuse (Delong).

Alcohol is both psychologically and physically dependence producing (Alcohol, no date; Dimoff, 1999). Alcoholism or alcohol dependence as opposed to heavy drinking or alcohol abuse is regarded as an illness and it said to be one of the most under-treated, treatable diseases in the world (Alcohol).

Alcoholism (alcohol dependence) is a disease that includes four symptoms (NIAAA, 2001). Firstly there is craving which is strong need to drink, secondly there is loss of control, which translates itself as the inability to limit ones drinking on any given occasion, thirdly physical dependence that includes withdrawal symptoms such as nausea, sweating, anxiety that occur when alcohol use is stopped after a period of heavy drinking, lastly there is tolerance, which is the need to drink greater amounts of alcohol in order to get "high" (NIAAA). Alcohol abuse is different to alcoholism in that it does not include an extremely strong compulsion to drink, loss of control over drinking, or physical dependence (NIAAA). Alcohol abuse is a pattern of drinking that results in one or more of the following situations within a one year period: failure to fulfil major work, school or home responsibilities, drinking when it is physically dangerous to do so such as while driving or operating machinery, having recurring alcohol related legal problems and continued drinking despite ongoing relationship problem that are caused or worsened by the drinking (NIAAA).

Alcohol is legal in many countries and its "moderate" use by "adults" is normative, acceptable behaviour in most countries (World Health organisation, 1973). This acceptable behaviour leads to the misconception that alcohol is safe. In reality alcohol is a dangerous drug that is very addictive and damaging (Dimoff, 1999). Alcohol causes one to feel relaxed and/or sociable which may be replaced with depression, anger, hostility, loss of control and drowsiness (Dimoff; Schlaadt & Shannon, 1994).

Effects of alcohol use vary with the individual (Dimoff, 1999). Alcohol lowers the ability of the brain to control behaviour, impairs ability to perform motor skills (driving), impairs memory and judgement and causes confusion. It also impairs ones reflexes and induces a false feeling of warmth, whilst actually depressing the hypothalamus (mechanism that controls body temperature) resulting in a body heat loss (Dimoff; Levinthal, 1996; Schlaadt & Shannon, 1994). Both tolerance and physical dependence can develop with the use of alcohol, and withdrawal can be a very serious clinical condition (Delong, 1972). Withdrawal symptoms include tremors, heavy sweating, weakness, agitation, headaches, nausea, vomiting, abdominal cramps, seizures and hallucinations (Dimoff; Health24, 2004; Trad, 1994).

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APPENDIX B
STATISTICAL ANALYSES

Appendix B: Extra statistical analyses

This appendix contains extra statistical information from the substance use and abuse survey.

Tables B1-5: Tabular representation of measures of central tendency of the respondent's first usage of the five most prevalent substances of use.

Table B1: Tobacco

	Descriptive Statistics				
Variable	Valid N	Mean	Median	Mode	Frequency of Mode
Tobacco Age	445	15.21348	15.00000	16.00000	80

Table B2: Alcohol

	Descriptive Statistics				
Variable	Valid N	Mean	Median	Mode	Frequency of Mode
Alcohol Age	565	15.05310	15.00000	16.00000	113

Table B3: Cannabis

	Descriptive Statistics				
Variable	Valid N	Mean	Median	Mode	Frequency of Mode
Cannabis Age	328	17.32317	18.00000	18.00000	84

Table B4: Amphetamines/stimulants

	Descriptive Statistics				
Variable	Valid N	Mean	Median	Mode	Frequency of Mode
Stimulants age	102	18.37255	17.00000	17.00000	27

Table B5: MDMA/Ecstasy

	Descriptive Statistics				
Variable	Valid N	Mean	Median	Mode	Frequency of Mode
MDMA/Ecstacy Age	81	18.14815	18.00000	18.00000	15

Tables B6 – B10 Statistics on inhalant usage.

Table B6

	Descriptive Statistics		
Variable	Valid N	Mode	Frequency of Mode
Inhalants	674	1.000000	593
Inhalants 12 months	81	1.000000	70
Inhalants 30 days	11	1.000000	7

Table B7

Variable	Descriptive Statistics				
	Valid N	Mean	Median	Mode	Frequency of Mode
Inhalants Age	75	15.22667	15.00000	Multiple	16

Table B8

Category	Have you sniffed or inhaled things to get high?			
	Count	Cumulative Count	Percent	Cumulative Percent
No	593	593	87.98220	87.9822
Yes	80	673	11.86944	99.8516
No Response	1	674	0.14837	100.0000

Table B9

Category	Have you sniffed or inhaled things to get high in the past 12 months?			
	Count	Cumulative Count	Percent	Cumulative Percent
No	70	70	86.41975	86.4198
Yes	10	80	12.34568	98.7654
No Response	1	81	1.23457	100.0000

Table B10

Category	Have you sniffed or inhaled things to get high in the past 30 days?			
	Count	Cumulative Count	Percent	Cumulative Percent
No	7	7	63.63636	63.6364
Yes 1-5	1	8	9.09091	72.7273
Yes 20+	1	9	9.09091	81.8182
No Response	2	11	18.18182	100.0000

Figures B1 – B3. Graphical representation of inhalant usage.

Figure B1

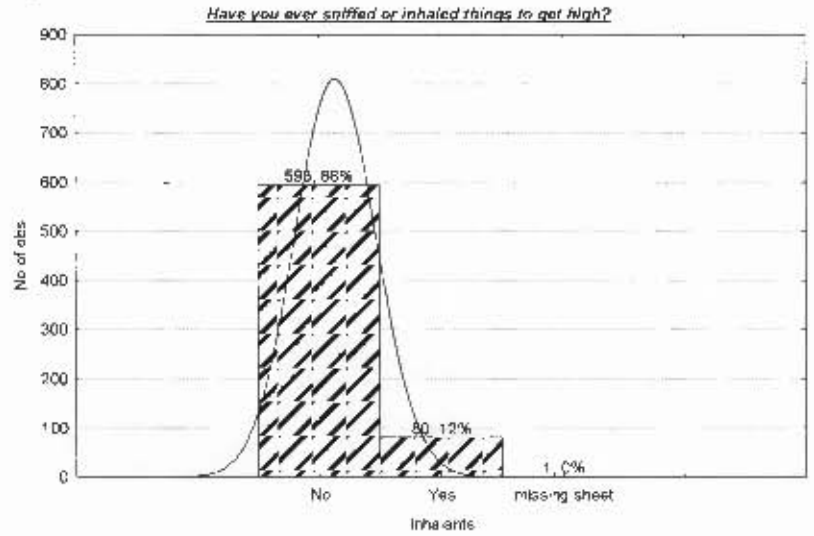


Figure B2

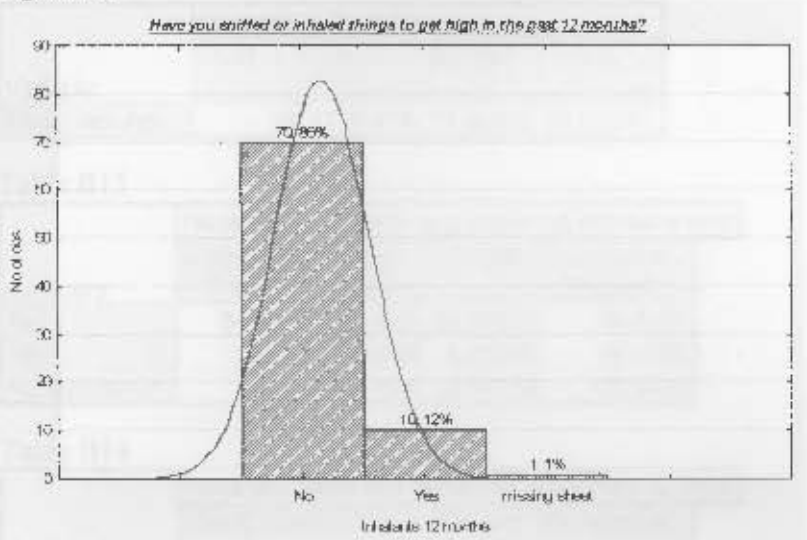
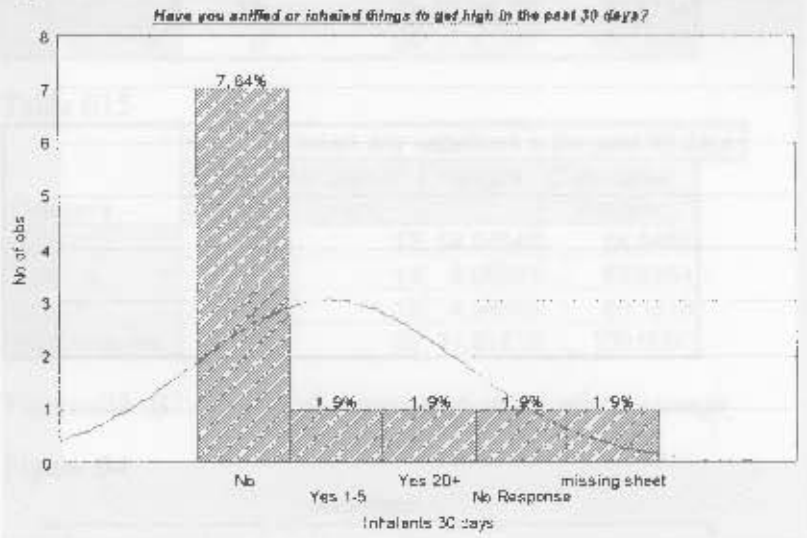


Figure B3



When asked about what type of inhalants the respondents took, deodorant sniffing (9), poppers (13), glue (9) and petrol (6) came up as the most prevalent. The numbers in brackets indicate the number of cases who reported using that specific inhalant.

Tables B11 – B15 Statistics on sedative usage.

Table B11

Variable	Descriptive Statistics		
	Valid N	Mode	Frequency of Mode
Sedatives	674	1.000000	646
Sedatives 12 months	28	2.000000	16
Sedatives 30 days	22	1.000000	12

Table B12

Variable	Descriptive Statistics			
	Valid N	Mean	Median	Mode
Sedatives Age	19	17.89474	18.00000	20.00000

Table B13

Category	Have you ever taken any sedatives without a doct			
	Count	Cumulative Count	Percent	Cumulative Percent
No	646	646	95.84570	95.8457
Yes	23	669	3.41246	99.2582
No Response	5	674	0.74184	100.0000

Table B14

Category	Have you taken any sedatives in the past 12 mont			
	Count	Cumulative Count	Percent	Cumulative Percent
No	6	6	21.42857	21.4286
Yes	16	22	57.14286	78.5714
No Response	6	28	21.42857	100.0000

Table B15

Category	Have you taken any sedatives in the past 30 days			
	Count	Cumulative Count	Percent	Cumulative Percent
No	12	12	54.54545	54.5455
Yes 1-5	2	14	9.09091	63.6364
Yes 20+	1	15	4.54545	68.1818
No Response	7	22	31.81818	100.0000

FiguresB4–B7. Graphical representation of sedative usage

Figure B4

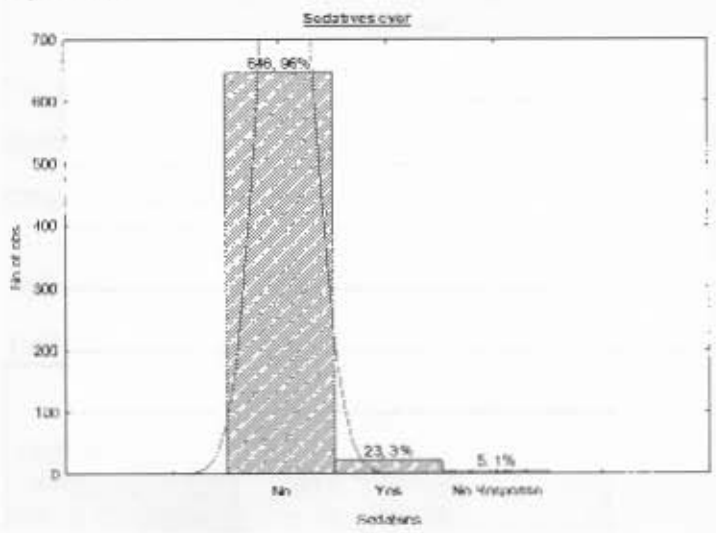


Figure B5

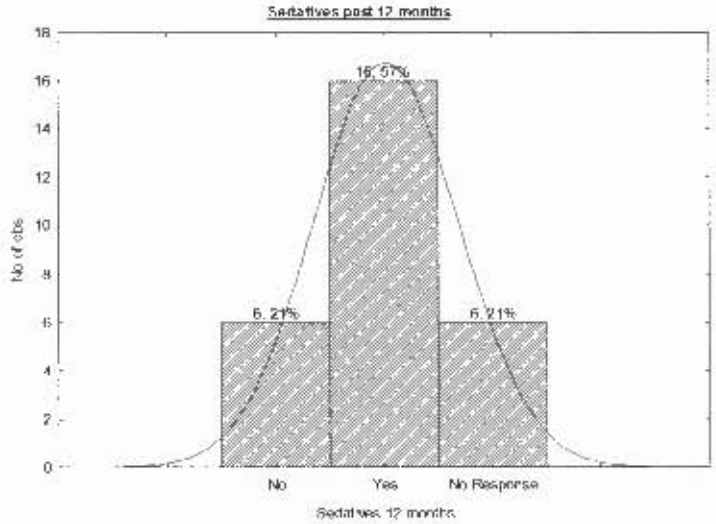
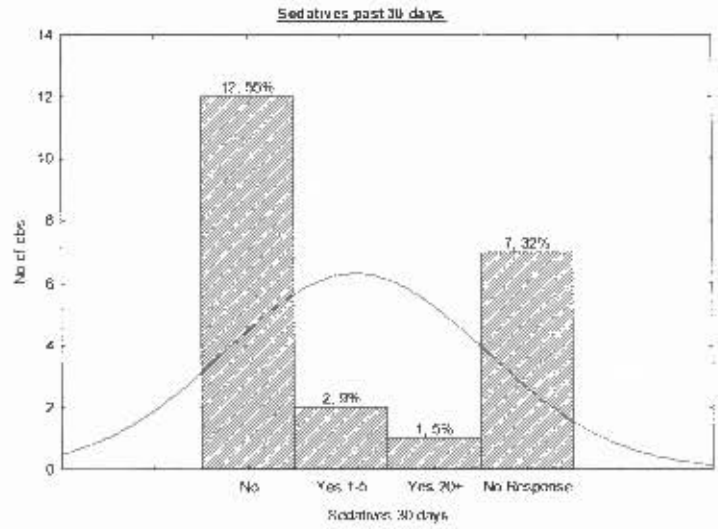


Figure B6



No specific sedative came up as the most prevalent, however the following were mentioned: Aropax, mandrax and F2, somnil, sleeping pills, mypaid, myprodol, nytol, cough mixture, synadforte, stress free, somnil, dormanoc, and zopiclone.

TablesB16–B21. Statistics on Heroin Usage

Table B16

Variable	Descriptive Statistics		
	Valid N	Mode	Frequency of Mode
Heroin	674	1.000000	663
Heroin 12 months	11	Multiple	5
Heroin 30 days	6	1.000000	4

Table B17

Variable	Descriptive Statistics			
	Valid N	Mean	Median	Mode
Heroin Age	8	17.62500	18.00000	18.00000

Table B18

Category	Have you ever taken any heroin?			
	Count	Cumulative Count	Percent	Cumulative Percent
No	663	663	98.36795	98.3680
Yes	10	673	1.48368	99.8516
No response	1	674	0.14837	100.0000

Table B19

Category	Have you taken any heroin in the past 12 months?			
	Count	Cumulative Count	Percent	Cumulative Percent
No	5	5	45.45455	45.4545
Yes	5	10	45.45455	90.9091
No response	1	11	9.09091	100.0000

Table B20

Category	Have you taken any heroin in the past 30 days?			
	Count	Cumulative Count	Percent	Cumulative Percent
No	4	4	66.66667	66.6667
Yes 1-5	1	5	16.66667	83.3333
No response	1	6	16.66667	100.0000

Table B21

Category	How old were you when you first took heroin?			
	Count	Cumulative Count	Percent	Cumulative Percent
14	1	1	12.50000	12.5000
15	1	2	12.50000	25.0000
18	3	5	37.50000	62.5000
19	2	7	25.00000	87.5000
20	1	8	12.50000	100.0000

Figures B7 B9. Graphical representation of heroin usage

Figure B7

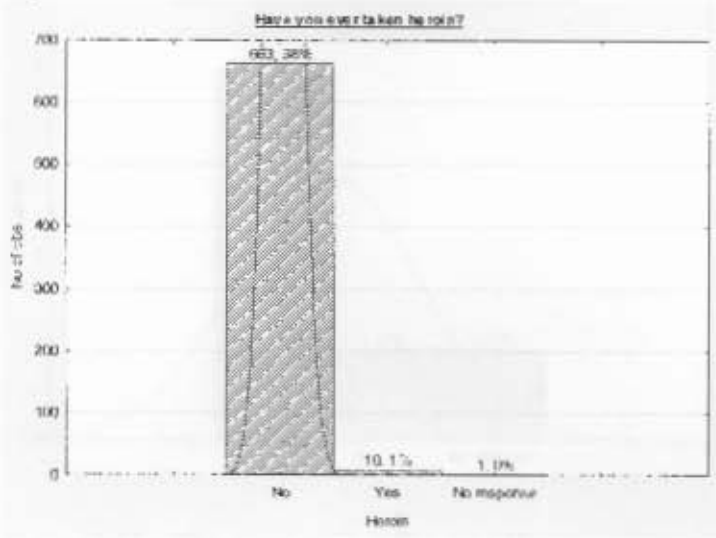


Figure B8

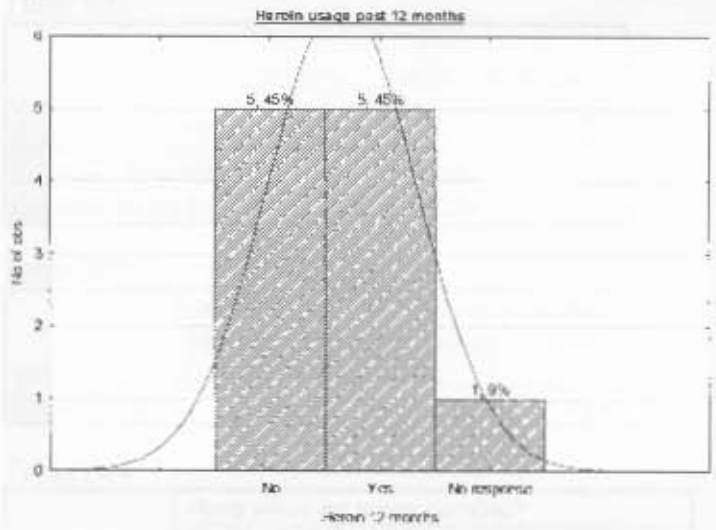
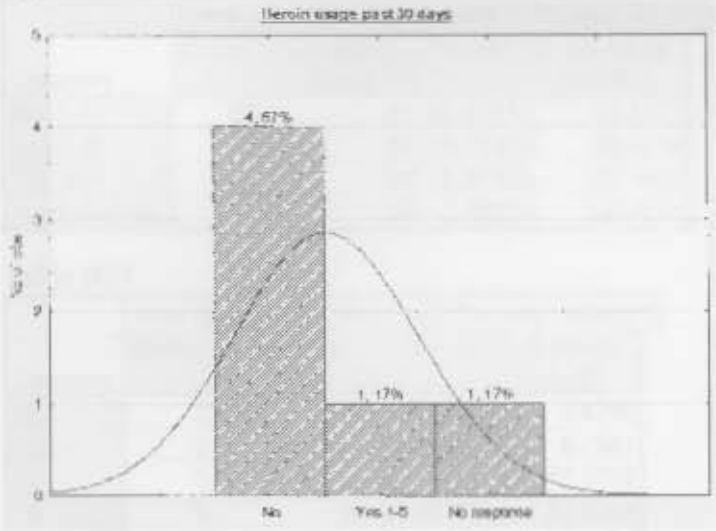


Figure B9



Tables B22 –B27. Statistics on Cocaine Usage

Table B22

Variable	Descriptive Statistics		
	Valid N	Mode	Frequency of Mode
Cocaine	674	1.000000	631
Cocaine 12 months	43	2.000000	34
Cocaine 30 days	35	1.000000	22

Table B23

Variable	Descriptive Statistics (Substance abuse)				
	Valid N	Mean	Median	Mode	F
Cocaine Age	41	19.24390	19.00000	Multiple	

Table B24

Category	Have you ever taken cocaine?			
	Count	Cumulative Count	Percent	Cumulative Percent
No	631	631	93.62018	93.6202
Yes	42	673	6.23145	99.8516
No response	1	674	0.14837	100.0000

Table B25

Category	Have you taken any cocaine in the past 12 months			
	Count	Cumulative Count	Percent	Cumulative Percent
No	8	8	18.60465	18.6047
Yes	34	42	79.06977	97.6744
No response	1	43	2.32558	100.0000

Table B26

Category	Have you taken any cocaine in the past 30 days?			
	Count	Cumulative Count	Percent	Cumulative Percent
No	22	22	62.85714	62.8571
Yes 1-5	9	31	25.71429	88.5714
Yes 20+	3	34	8.57143	97.1429
No response	1	35	2.85714	100.0000

Table B27

Category	How old were you when you first took cocaine?			
	Count	Cumulative Count	Percent	Cumulative Percent
15	2	2	4.87805	4.8780
16	2	4	4.87805	9.7561
17	3	7	7.31707	17.0732
18	9	16	21.95122	39.0244
19	9	25	21.95122	60.9756
20	7	32	17.07317	78.0488
21	3	35	7.31707	85.3659
22	3	38	7.31707	92.6829
23	1	39	2.43902	95.1220
24	1	40	2.43902	97.5610
27	1	41	2.43902	100.0000

Figures B10 – B12. Graphical representation of cocaine usage

Figure B10

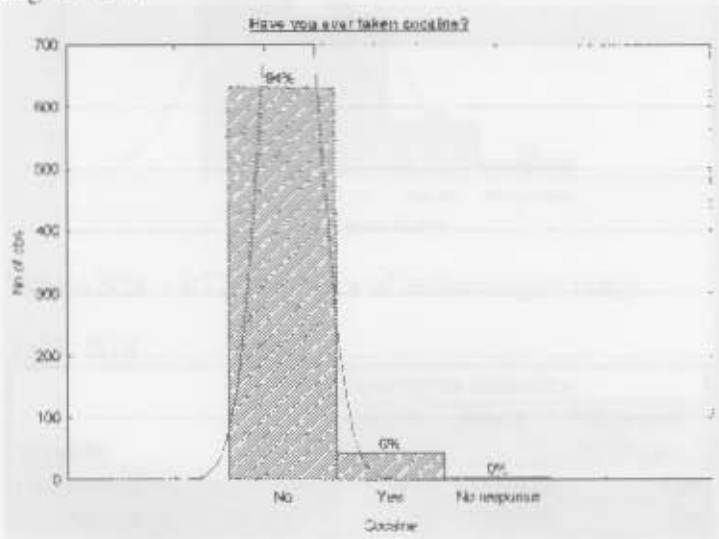


Figure B11

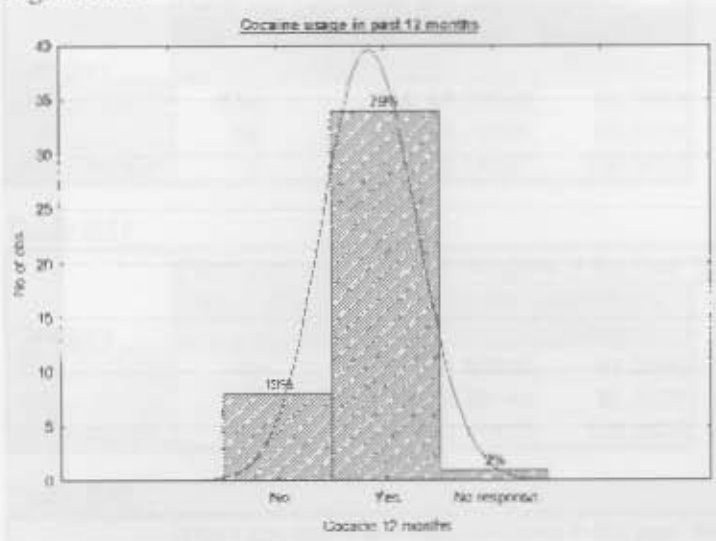
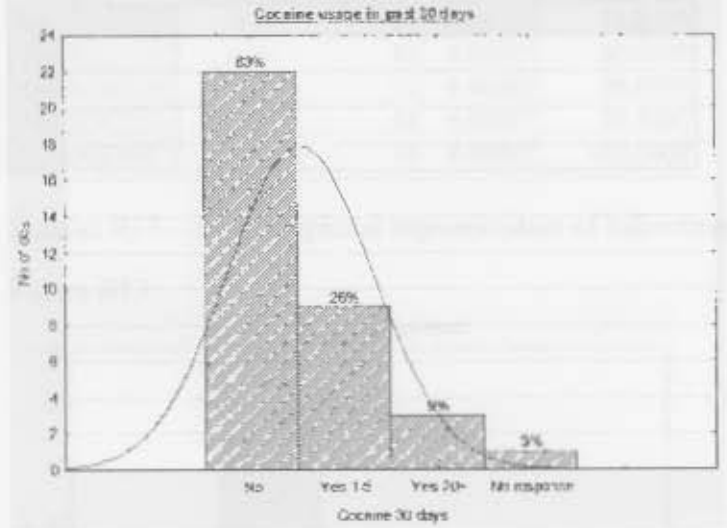


Figure B12



Tables B28 B32: Statistics of hallucinogen usage.

Table B28

Variable	Descriptive Statistics		
	Valid N	Mode	Frequency of Mode
Hallucingpens	674	1.000000	634
Hallucinogens 12 months	39	1.000000	24
Hallucinogens 30 days	15	1.000000	11

Table B29

Variable	Descriptive Statistics			
	Valid N	Mean	Median	Mode
Hallucinogen Age	36	17.80556	18.00000	Multiple

Table B30

Category	Have you ever taken any hallucinogens? Count	Cumulative Count	Percent	Cumulative Percent
No	634	634	94.06528	94.0653
Yes	39	673	5.78635	99.8516
No response	1	674	0.14837	100.0000

Table B31

Category	Have you taken any hallucinogens in the past 12 m Count	Cumulative Count	Percent	Cumulative Percent
No	24	24	61.53846	61.5385
Yes	14	38	35.89744	97.4359
No response	1	39	2.56410	100.0000

Table B32

Category	Have you taken any hallucinogens in the past 30 d. Count	Cumulative Count	Percent	Cumulative Percent
No	11	11	73.33333	73.3333
Yes 1-5	1	12	6.66667	80.0000
Yes 6-19	1	13	6.66667	86.6667
Yes 20+	1	14	6.66667	93.3333
No response	1	15	6.66667	100.0000

Figures B13 – B15. Graphical representation of hallucinogen usage.

Figure B13

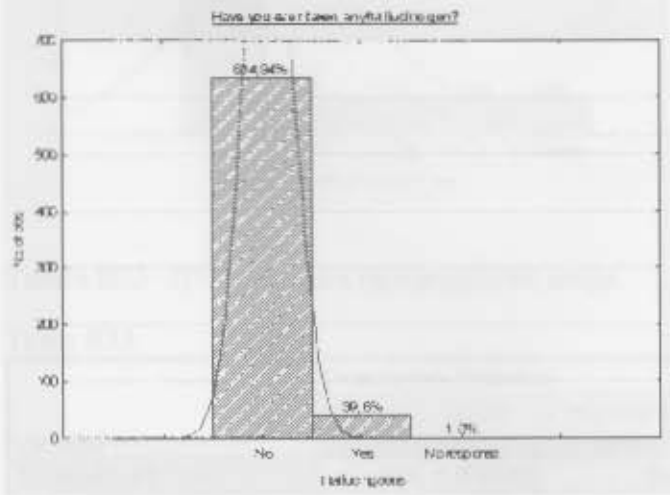


Figure B14

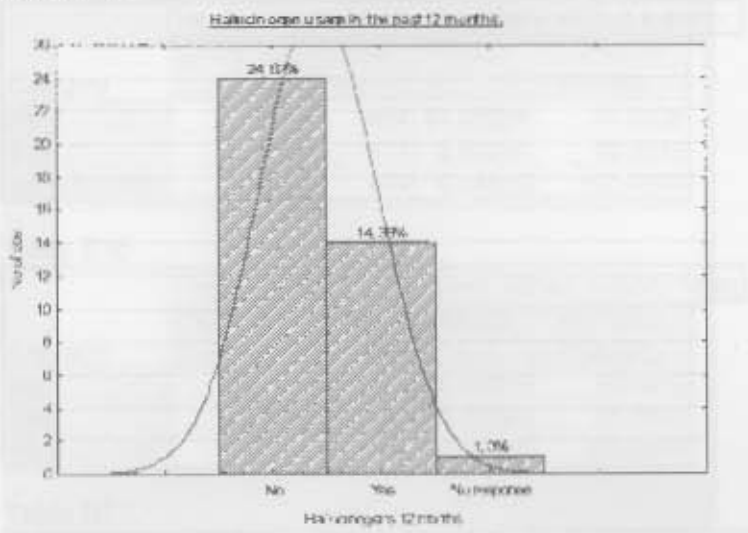
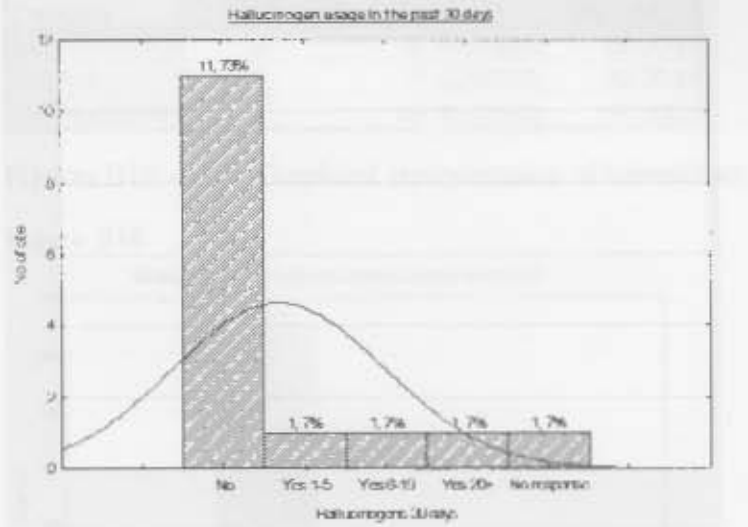


Figure B15



Tables B33 B37. Statistics on tranquiliser usage.

Table B33

Variable	Descriptive Statistics		
	Valid N	Mode	Frequency of Mode
Tranquilisers	674	1.000000	654
Tranquilisers 12 months	20	1.000000	10
Tranquilisers 30 days	10	1.000000	5

Table B34

Variable	Descriptive Statistics			
	Valid N	Mean	Median	Mode
Tranquiliser Age	14	16.35714	17.00000	17.00000

Table B35

Category	Have you ever taken tranquilisers without a doctor			
	Count	Cumulative Count	Percent	Cumulative Percent
No	654	654	97.03264	97.0326
Yes	17	671	2.52226	99.5549
No response	3	674	0.44510	100.0000

Table B36

Category	Have you taken tranquilisers without a doctor telling			
	Count	Cumulative Count	Percent	Cumulative Percent
No	10	10	50.00000	50.0000
Yes	7	17	35.00000	85.0000
No response	3	20	15.00000	100.0000

Table B37

Category	Have you taken any tranquilisers in the past 30 da			
	Count	Cumulative Count	Percent	Cumulative Percent
No	5	5	50.00000	50.0000
Yes 1-5	2	7	20.00000	70.0000
No Response	3	10	30.00000	100.0000

Figures B16 – B18: Graphical representation of tranquiliser usage.

Figure B16

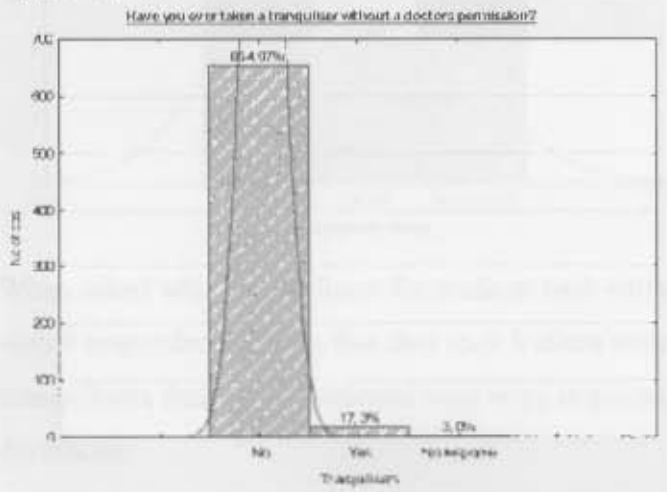


Figure B17

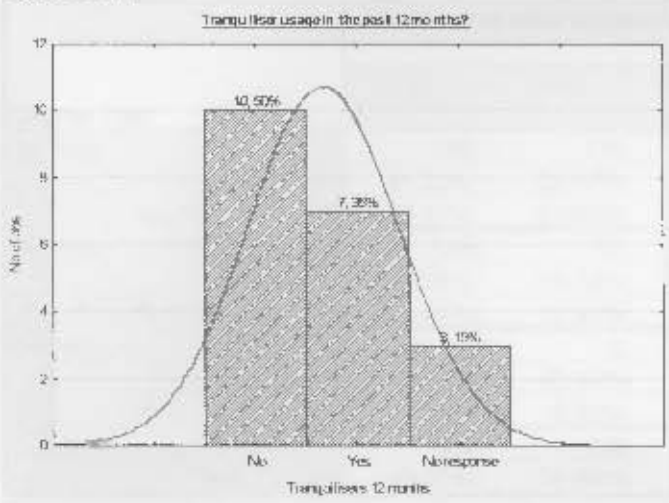
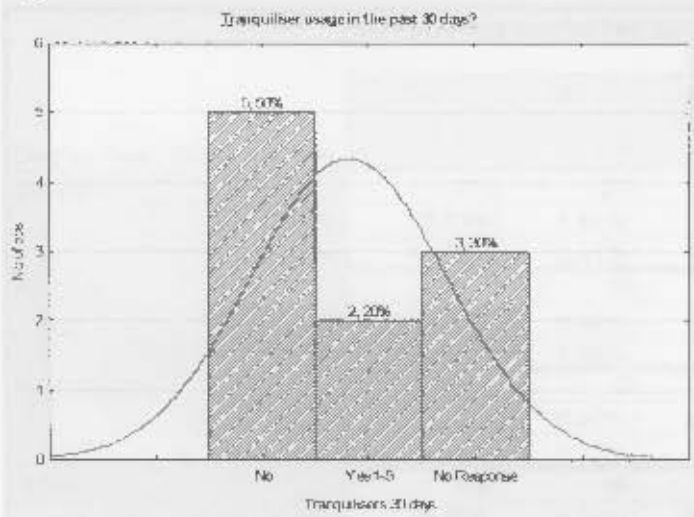


Figure B18



When asked what tranquilisers the students took valium (4) came up as the most prevalent with 4 respondents stating that they took Valium without a doctor's prescription. Other tranquilisers that were mentioned once were stopayne, xanor, rescue remedy and dormacon.

Tabular representation of the nine statements students were asked regarding UCT. Tables B38 B46

Table B38

Degree Year	UCT does not allow alcohol on its premises				
	Yes	No	Do not know	No response	Row Totals
1st year	169	119	120	2	410
1st Year %	41.22%	29.02%	29.27%	0.49%	
% of Total Sample	25.07%	17.66%	17.80%	0.30%	60.83%
4th year	138	87	32	2	259
4th Year %	53.28%	33.59%	12.36%	0.77%	
% of Total Sample	20.47%	12.91%	4.75%	0.30%	38.43%
No response	2	2	1	0	5
No response %	40.00%	40.00%	20.00%	0.00%	
% of Total Sample	0.30%	0.30%	0.15%	0.00%	0.74%
Totals	309	208	153	4	674
Total Percent	45.85%	30.86%	22.70%	0.59%	100.00%

Table B39

Degree Year: Year of Degree	UCT provides alcohol free food facilities				
	Yes	No	Do not know	No response	Row Totals
1st year	315	23	70	2	410
1st Year %	76.83%	5.61%	17.07%	0.49%	
% of Total Sample	46.74%	3.41%	10.39%	0.30%	60.83%
4th year	219	13	26	1	259
4th Year %	84.56%	5.02%	10.04%	0.39%	
% of Total Sample	32.49%	1.93%	3.86%	0.15%	38.43%
No response	4	0	1	0	5
No response %	80.00%	0.00%	20.00%	0.00%	
% of Total Sample	0.59%	0.00%	0.15%	0.00%	0.74%
Totals	538	36	97	3	674
Total Percent	79.82%	5.34%	14.39%	0.45%	100.00%

Table B40

Degree Year	I am not allowed to carry alcohol and drugs while on UCT campuses.				
	Yes	No	Do not know	No response	Row Totals
1st year	253	52	102	3	410
1st Year %	61.71%	12.68%	24.88%	0.73%	
% of Total Sample	37.54%	7.72%	15.13%	0.45%	60.83%
4th year	187	29	40	3	259
4th Year %	72.20%	11.20%	15.44%	1.16%	
% of Total Sample	27.74%	4.30%	5.93%	0.45%	38.43%
No response	3	1	1	0	5
No response %	60.00%	20.00%	20.00%	0.00%	
% of Total Sample	0.45%	0.15%	0.15%	0.00%	0.74%
Totals	443	82	143	6	674
Total Percent	65.73%	12.17%	21.22%	0.89%	100.00%

Table B44

Degree Year	I feel that some form of spot checks/testing at UCT is necessary. Yes	No	Do not know	No response	Row Totals
1st year	102	224	79	5	410
1st Year %	24.88%	54.63%	19.27%	1.22%	
4% of Total Sample	15.13%	33.23%	11.72%	0.74%	60.83%
4th year	57	156	43	3	259
4th Year %	22.01%	60.23%	16.60%	1.16%	
% of Total Sample	8.46%	23.15%	6.38%	0.45%	38.43%
No response	0	3	2	0	5
No response %	0.00%	60.00%	40.00%	0.00%	
% of Total Sample	0.00%	0.45%	0.30%	0.00%	0.74%
Totals	159	383	124	8	674
Total Percent	23.59%	56.82%	18.40%	1.19%	100.00%

Table B45

Degree Year	I would have objections to spot checks/testing at UCT Yes	No	Do not know	No response	Row Totals
1st year	185	179	43	3	410
1st Year %	45.12%	43.66%	10.49%	0.73%	
% of Total Sample	27.45%	26.56%	6.38%	0.45%	60.83%
4th year	130	114	14	1	259
4th Year %	50.19%	44.02%	5.41%	0.39%	
% of Total Sample	19.29%	16.91%	2.08%	0.15%	38.43%
No response	2	1	2	0	5
No response %	40.00%	20.00%	40.00%	0.00%	
% of Total Sample	0.30%	0.15%	0.30%	0.00%	0.74%
Totals	317	294	59	4	674
Total Percent	47.03%	43.62%	8.75%	0.59%	100.00%

Table B46

Degree Year	If UCT does or had to do spot checks/testing I am worried that I may be exposed. Yes	No	Do not know	No response	Row Totals
1st year	35	335	37	3	410
1st Year %	8.54%	81.71%	9.02%	0.73%	
% of Total Sample	5.19%	49.70%	5.49%	0.45%	60.83%
4th year	26	226	5	2	259
4th Year %	10.04%	87.26%	1.93%	0.77%	
% of Total Sample	3.86%	33.53%	0.74%	0.30%	38.43%
No response	1	4	0	0	5
No response %	20.00%	80.00%	0.00%	0.00%	
% of Total Sample	0.15%	0.59%	0.00%	0.00%	0.74%
Totals	62	565	42	5	674
Total Percent	9.20%	83.83%	6.23%	0.74%	100.00%

Table B44

Degree Year	I feel that some form of spot checks/testing at UCT is necessary. Yes	No	Do not know	No response	Row Totals
1st year	102	224	79	5	410
1st Year %	24.88%	54.63%	19.27%	1.22%	
4% of Total Sample	15.13%	33.23%	11.72%	0.74%	60.83%
4th year	57	156	43	3	259
4th Year %	22.01%	60.23%	16.60%	1.16%	
% of Total Sample	8.46%	23.15%	6.38%	0.45%	38.43%
No response	0	3	2	0	5
No response %	0.00%	60.00%	40.00%	0.00%	
% of Total Sample	0.00%	0.45%	0.30%	0.00%	0.74%
Totals	159	383	124	8	674
Total Percent	23.59%	56.82%	18.40%	1.19%	100.00%

Table B45

Degree Year	I would have objections to spot checks/testing at UCT Yes	No	Do not know	No response	Row Totals
1st year	185	179	43	3	410
1st Year %	45.12%	43.66%	10.49%	0.73%	
% of Total Sample	27.45%	26.56%	6.38%	0.45%	60.83%
4th year	130	114	14	1	259
4th Year %	50.19%	44.02%	5.41%	0.39%	
% of Total Sample	19.29%	16.91%	2.08%	0.15%	38.43%
No response	2	1	2	0	5
No response %	40.00%	20.00%	40.00%	0.00%	
% of Total Sample	0.30%	0.15%	0.30%	0.00%	0.74%
Totals	317	294	59	4	674
Total Percent	47.03%	43.62%	8.75%	0.59%	100.00%

Table B46

Degree Year	If UCT does or had to do spot checks/testing I am worried that I may be exposed. Yes	No	Do not know	No response	Row Totals
1st year	35	335	37	3	410
1st Year %	8.54%	81.71%	9.02%	0.73%	
% of Total Sample	5.19%	49.70%	5.49%	0.45%	60.83%
4th year	26	226	5	2	259
4th Year %	10.04%	87.26%	1.93%	0.77%	
% of Total Sample	3.86%	33.53%	0.74%	0.30%	38.43%
No response	1	4	0	0	5
No response %	20.00%	80.00%	0.00%	0.00%	
% of Total Sample	0.15%	0.59%	0.00%	0.00%	0.74%
Totals	62	565	42	5	674
Total Percent	9.20%	83.83%	6.23%	0.74%	100.00%

Table B47 – B50 deal with information supplied by UCT.

Table B47

Information acquired	Descriptive Statistics		
	Valid N	Mode	Frequency of Mode
Health effects	674	2.000000	532
Recognise Drinking	674	2.000000	523
Extent info helpful	674	7.000000	230

Table B48

Category	Have youreceived information from UCT on long term effects of substance abuse?			
	Count	Cumulative Count	Percent	Cumulative Percent
Yes	136	136	20.17804	20.1780
No	532	668	78.93175	99.1098
No Response	6	674	0.89021	100.0000

Table B49

Category	Have you received information from UCT on how to recognise someone with a drinking problem?			
	Count	Cumulative Count	Percent	Cumulative Percent
Yes	147	147	21.81009	21.8101
No	523	670	77.59644	99.4065
No Response	4	674	0.59347	100.0000

Table B50

Category	Extent of helpfulness of information supplied by UCT			
	Count	Cumulative Count	Percent	Cumulative Percent
Very helpful	19	19	2.81899	2.8190
Helpful	171	190	25.37092	28.1899
Neither	178	368	26.40950	54.5994
Not helpful	23	391	3.41246	58.0119
Not very helpful	37	428	5.48961	63.5015
No Response	16	444	2.37389	65.8754
N/A	230	674	34.12463	100.0000
Missing	0	674	0.00000	100.0000

Tables B51-B52: Frequency tables for questions regarding drug and alcohol abuse:

Table B51

Category	Do you abuse drugs?			
	Count	Cumulative Count	Percent	Cumulative Percent
No	218	218	87.20000	87.2000
Yes	12	230	4.80000	92.0000
No Response	20	250	8.00000	100.0000

Table B52

Category	Do you abuse alcohol?			
	Count	Cumulative Count	Percent	Cumulative Percent
No	130	130	52.00000	52.0000
Yes	112	242	44.80000	96.8000
No Response	8	250	3.20000	100.0000

Tables B53 – B54 deal with whether students have been alerted by UCT re substance abuse and if so how.

Table B53

Variable	Descriptive Statistics		
	Valid N	Mode	Frequency of Mode
Alerted	674	3.000000	341

Table B54

Variable	Descriptive Statistics
	Valid N
Posters/leaflets	76
Seminars or courses	31
Letters	4
Other	7

Figures B19 – B28: Gender and degree year compared with how difficult/easy students found it to get certain substances on UCT campuses.

Figure B19

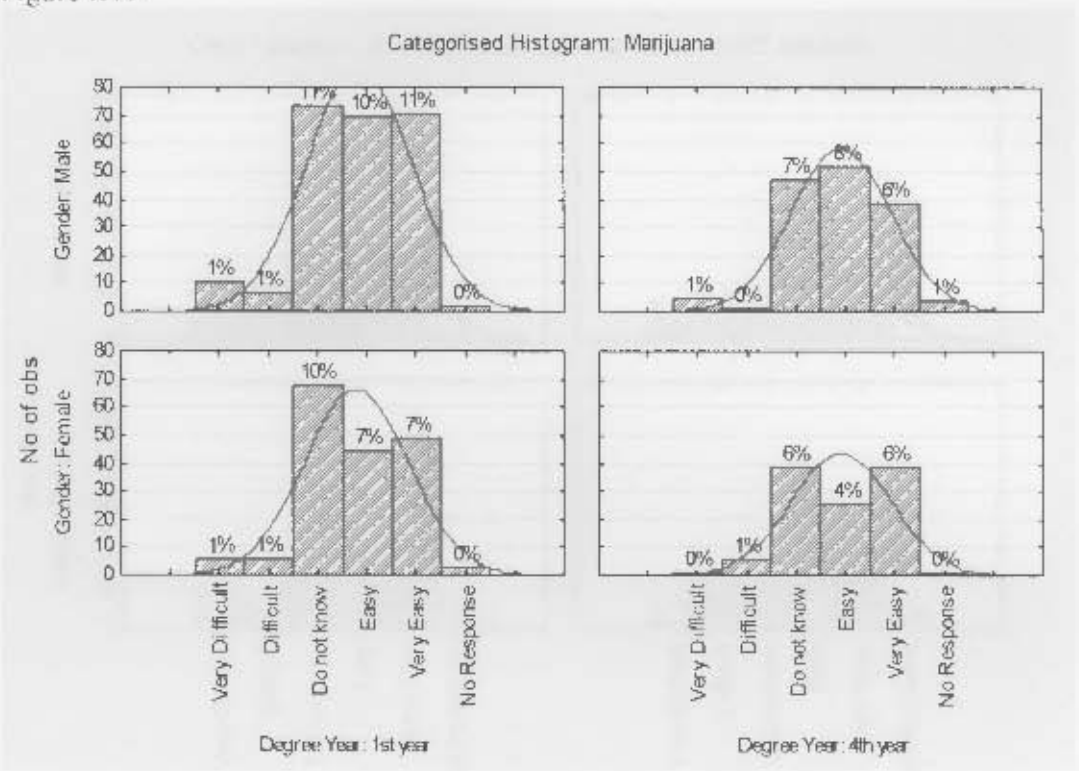


Figure B20

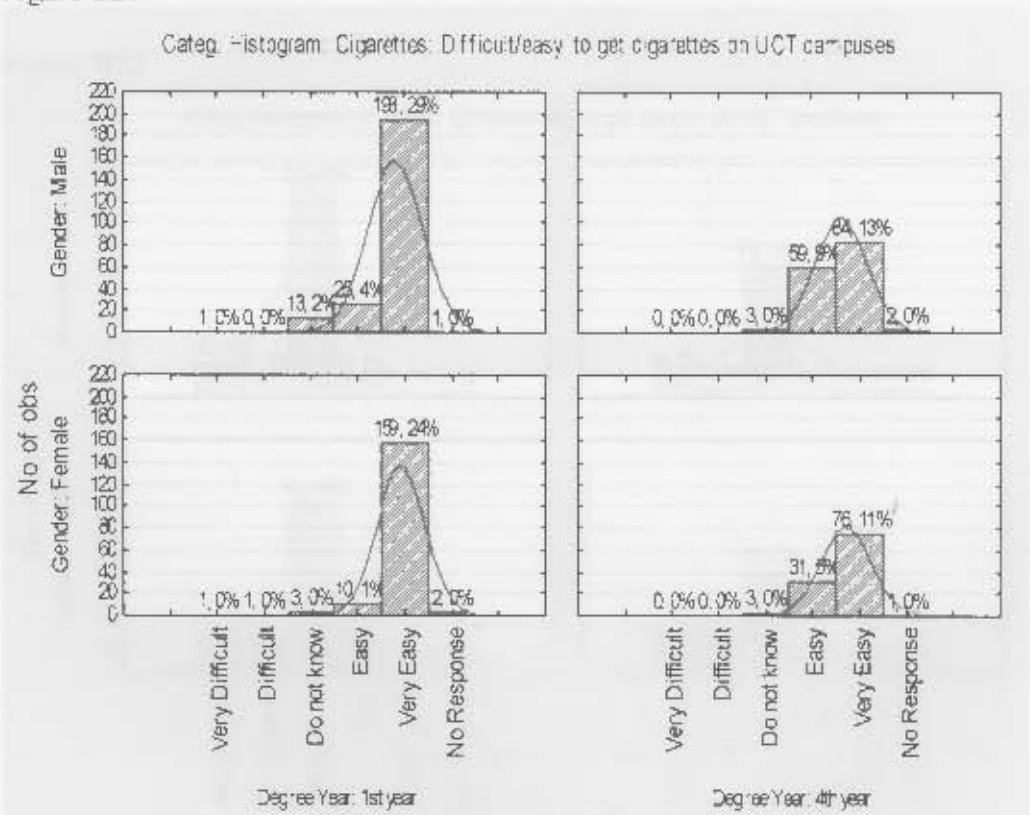


Figure B21

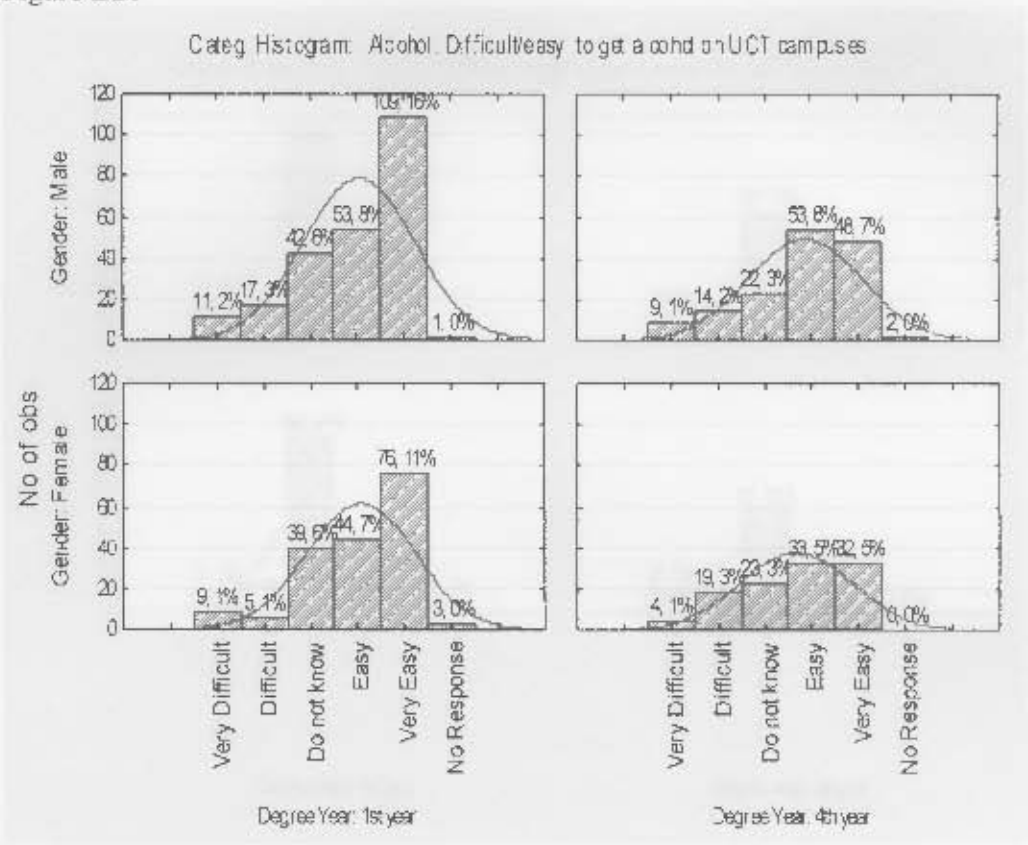
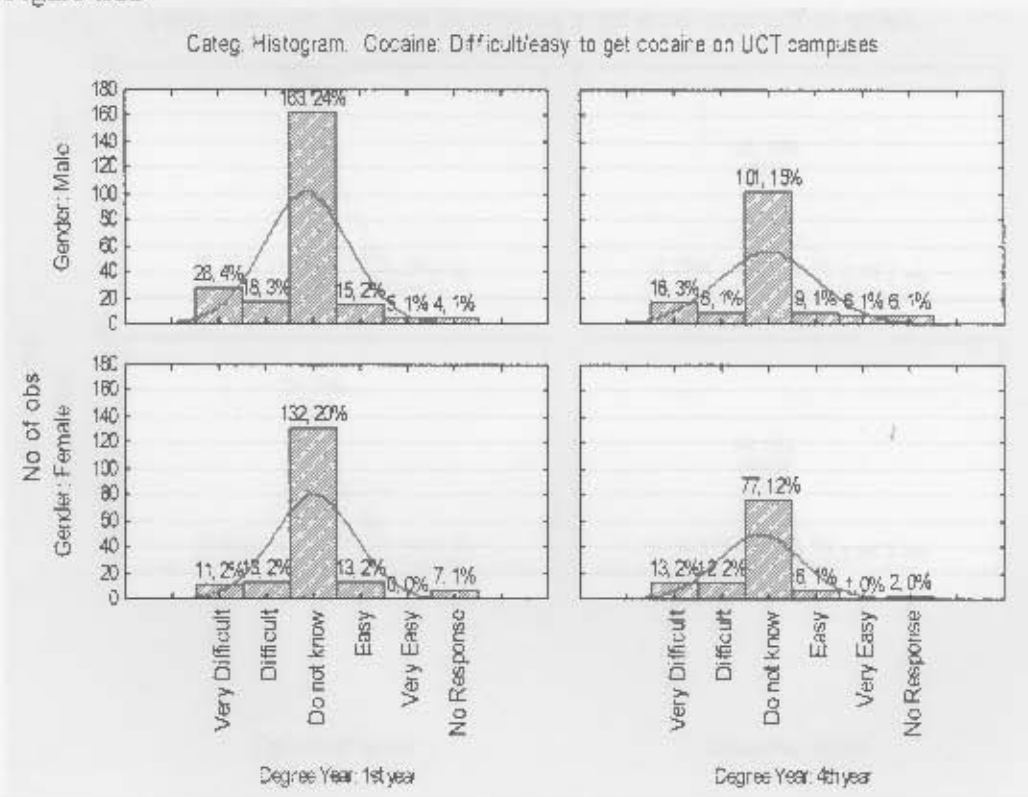


Figure B22



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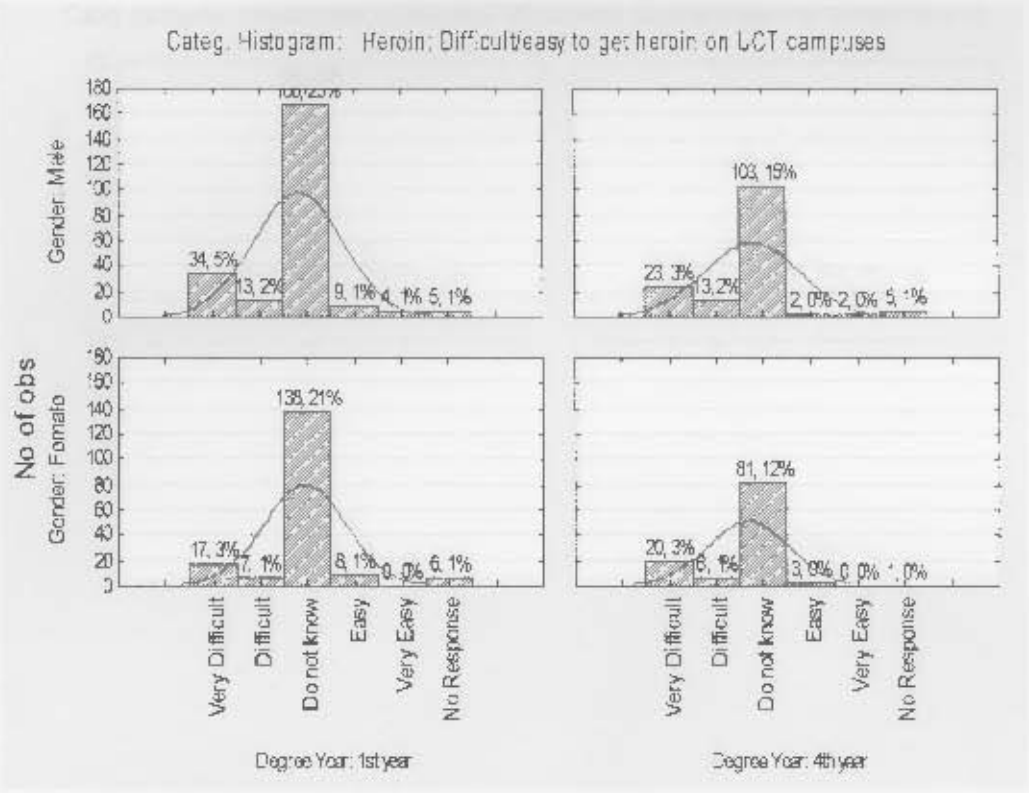


Figure B24

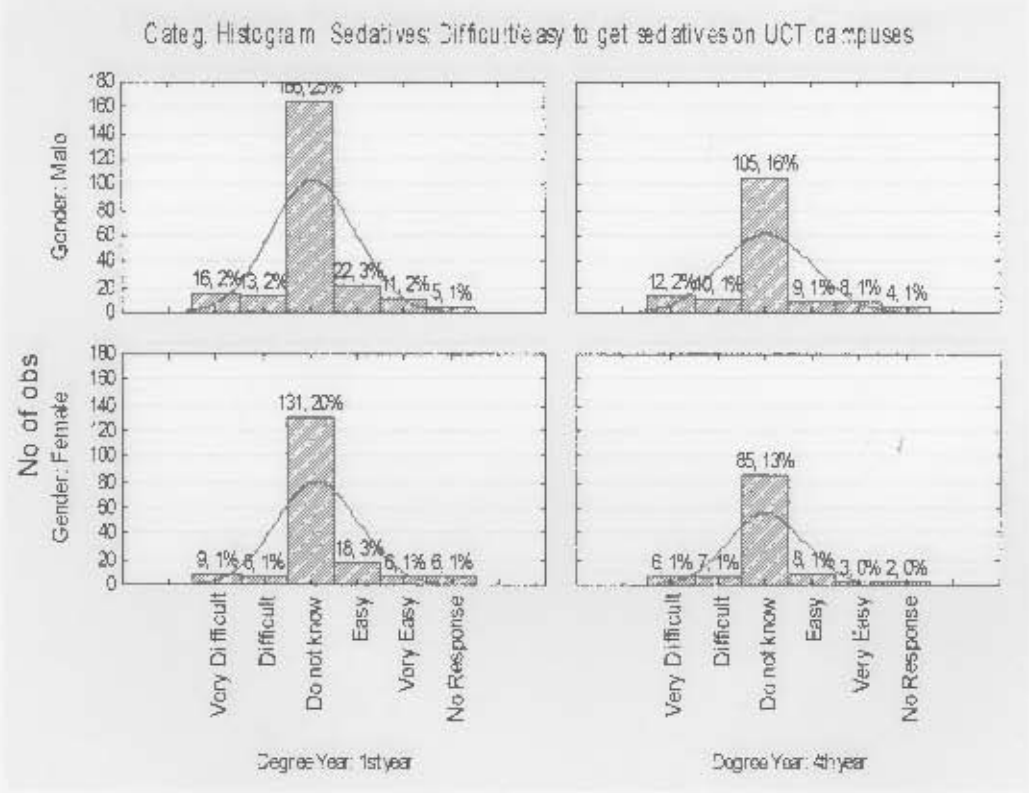


Figure B25

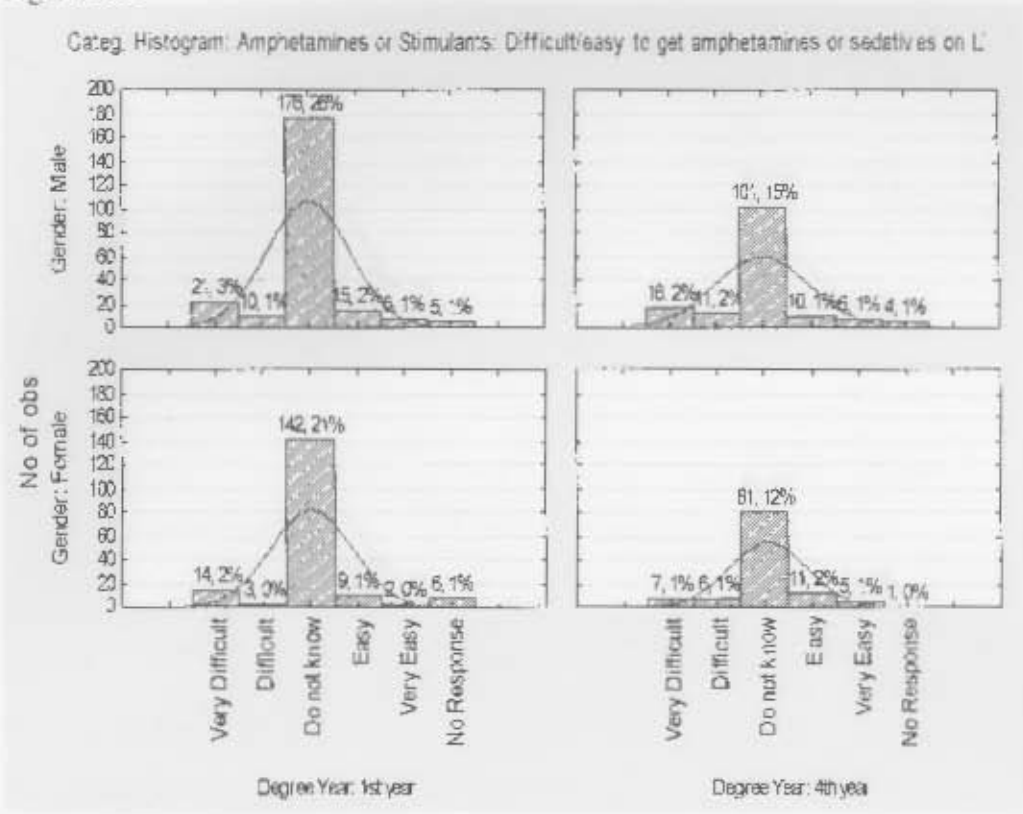


Figure B26

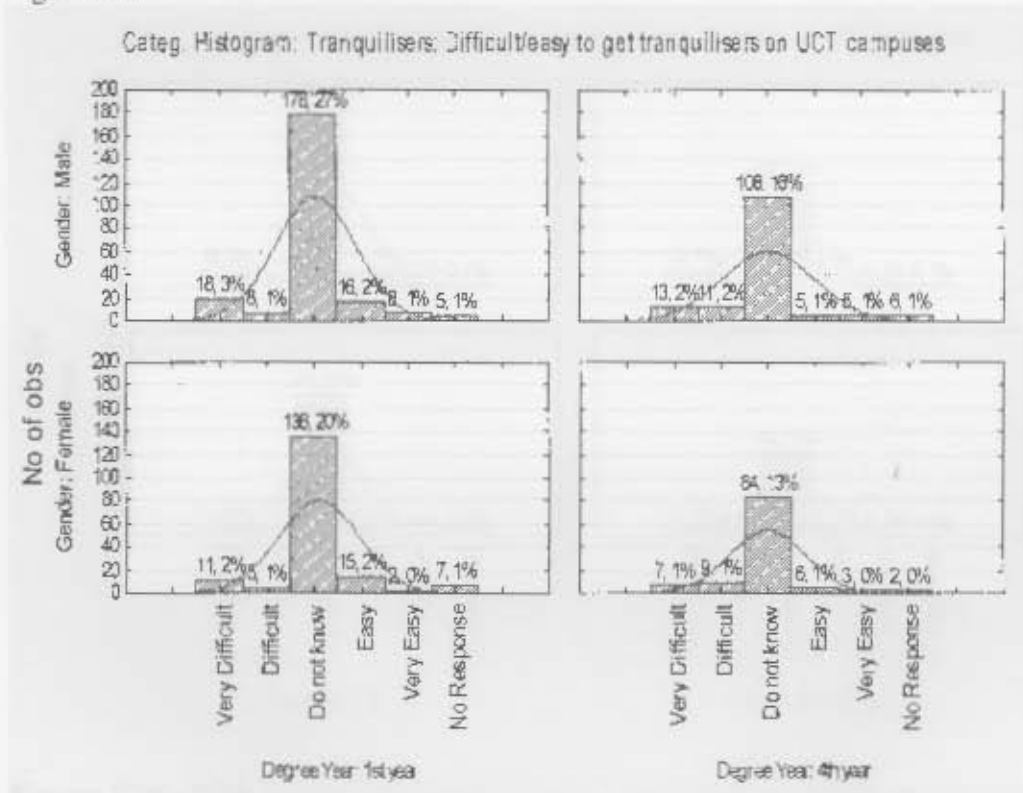


Figure B27

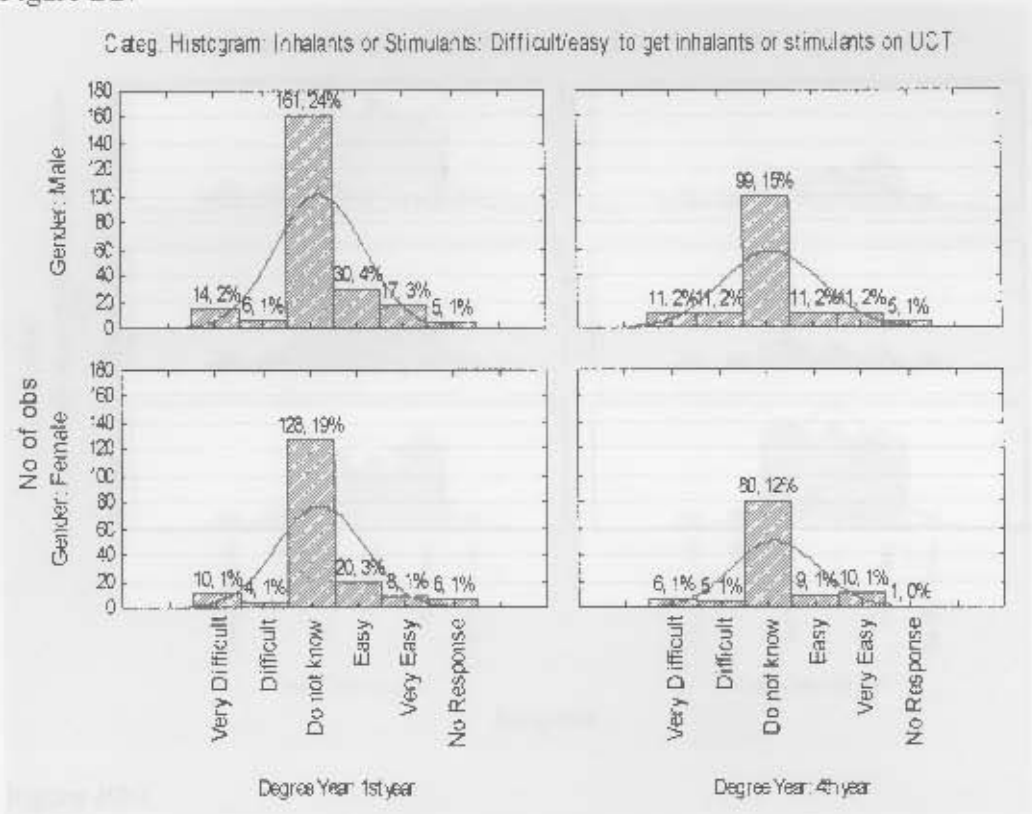
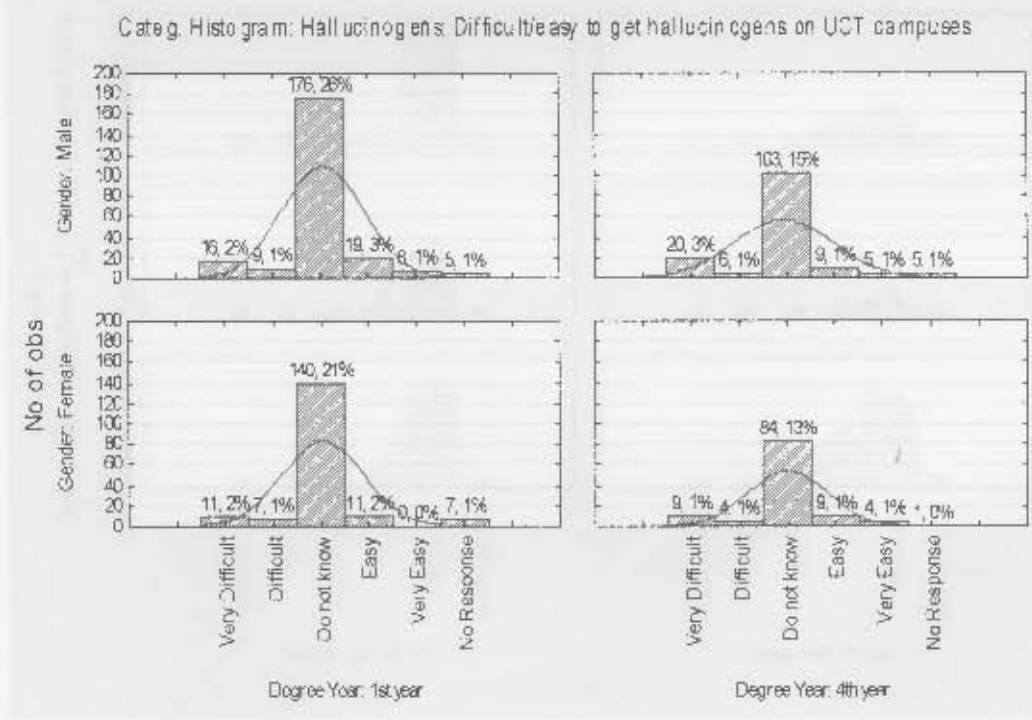


Figure B28



Figures B29 – B38: Degree and degree year compared with how difficult/easy students found it to get certain substances on UCT campuses.

Figure B29

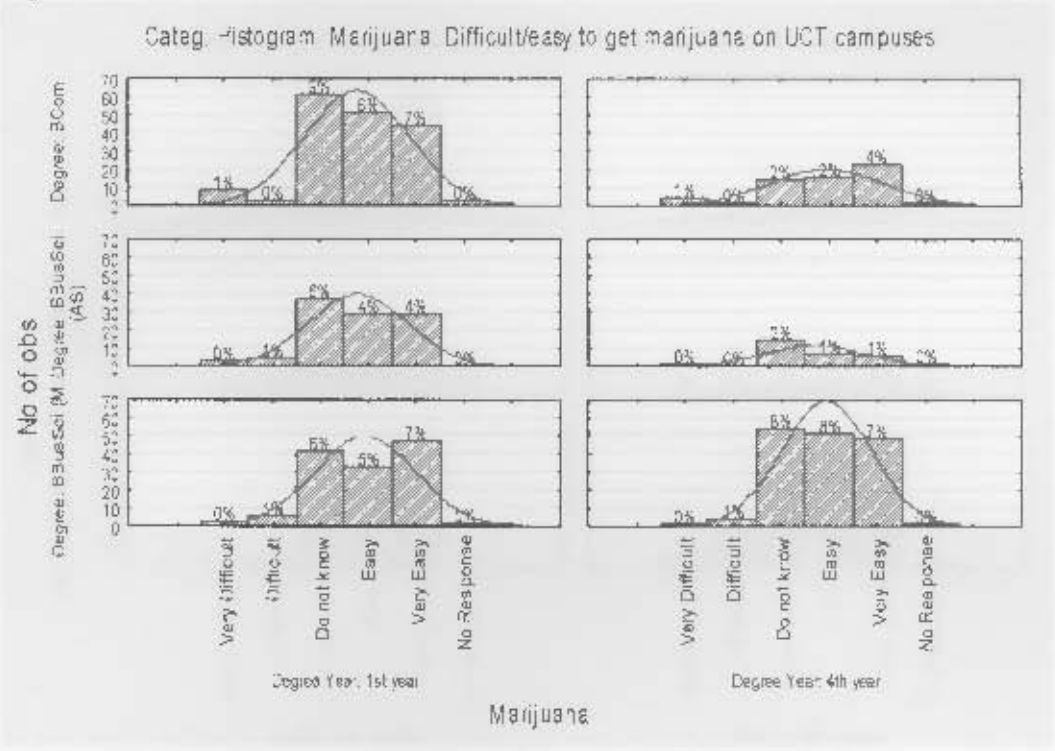


Figure B30

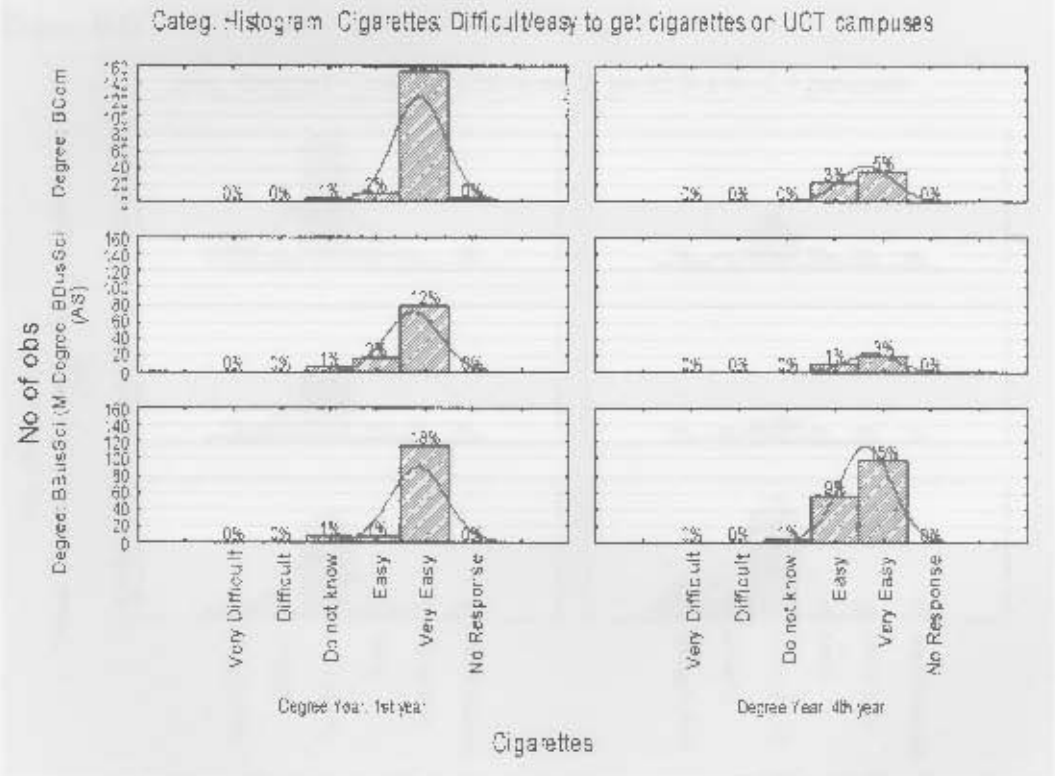
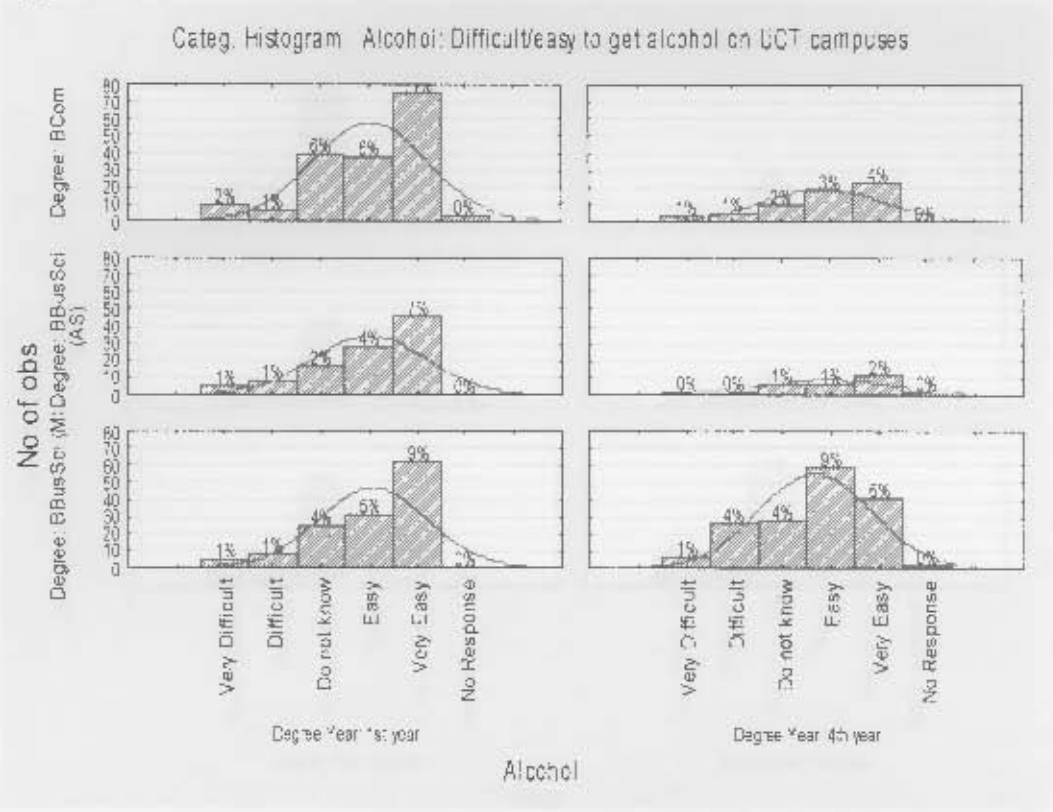


Figure B31



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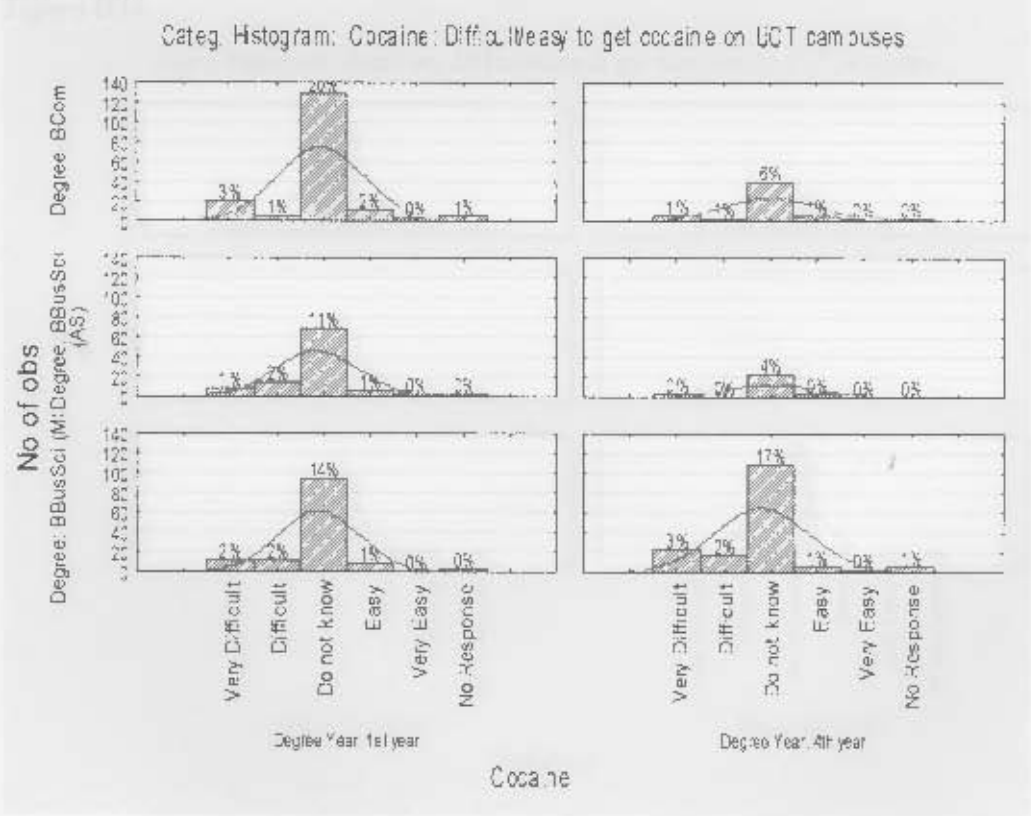
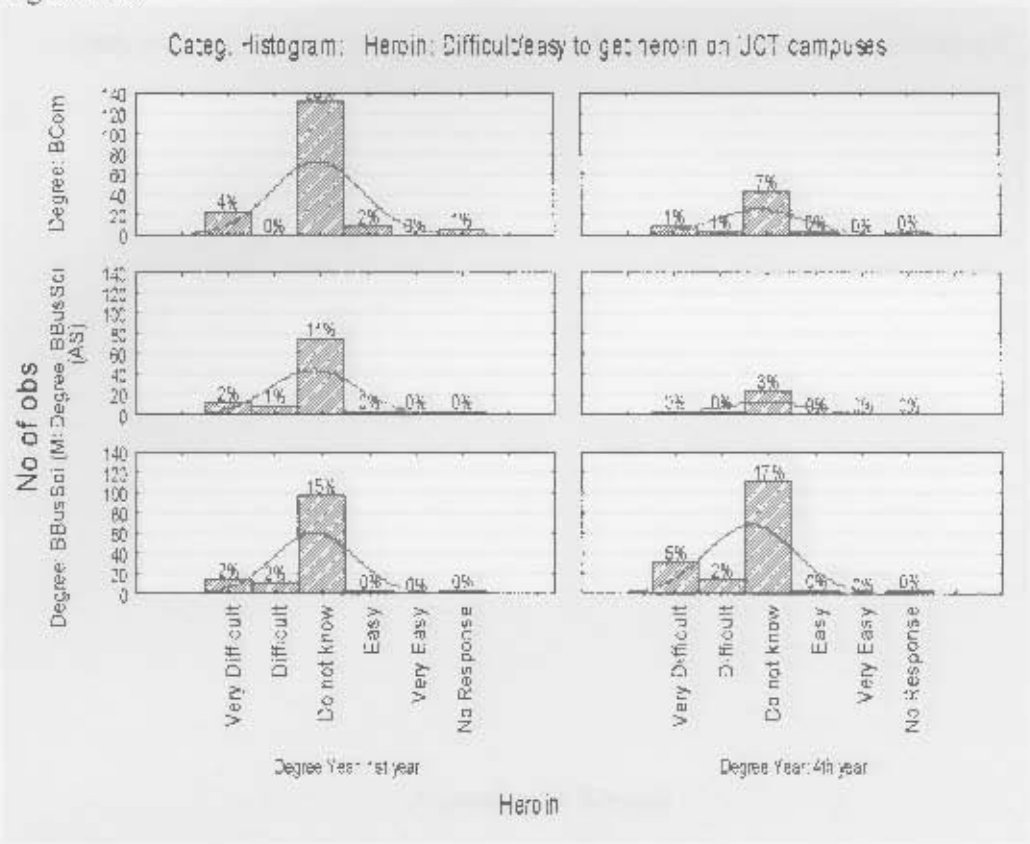


Figure B33



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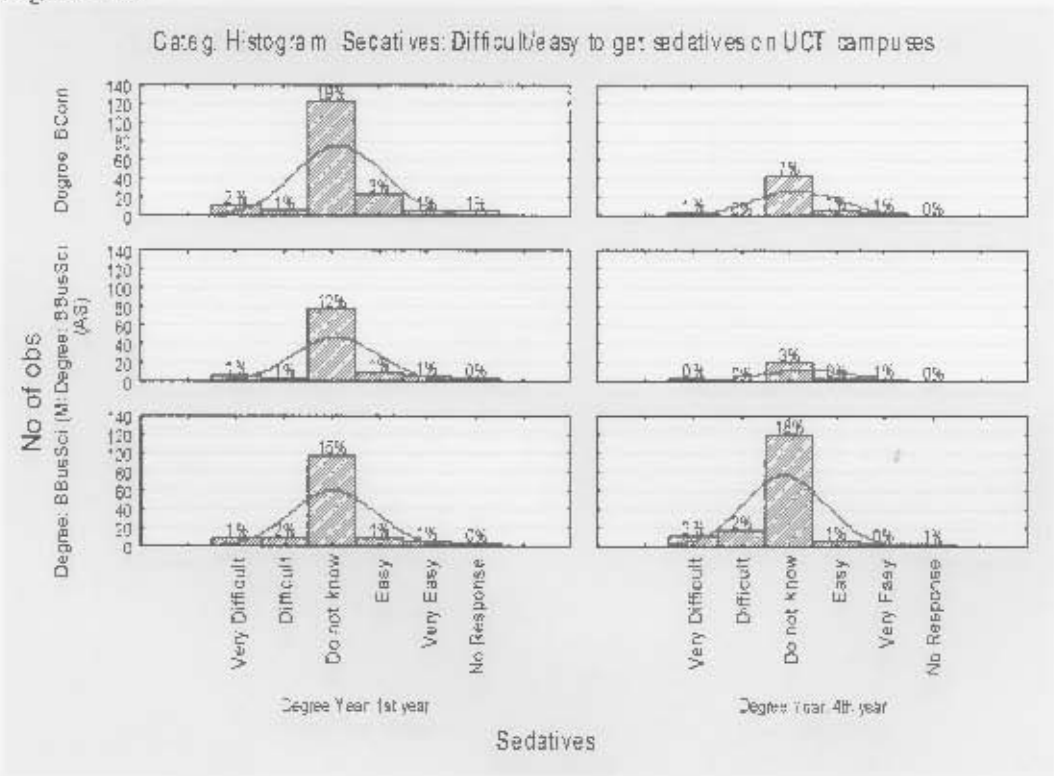

Figure B35

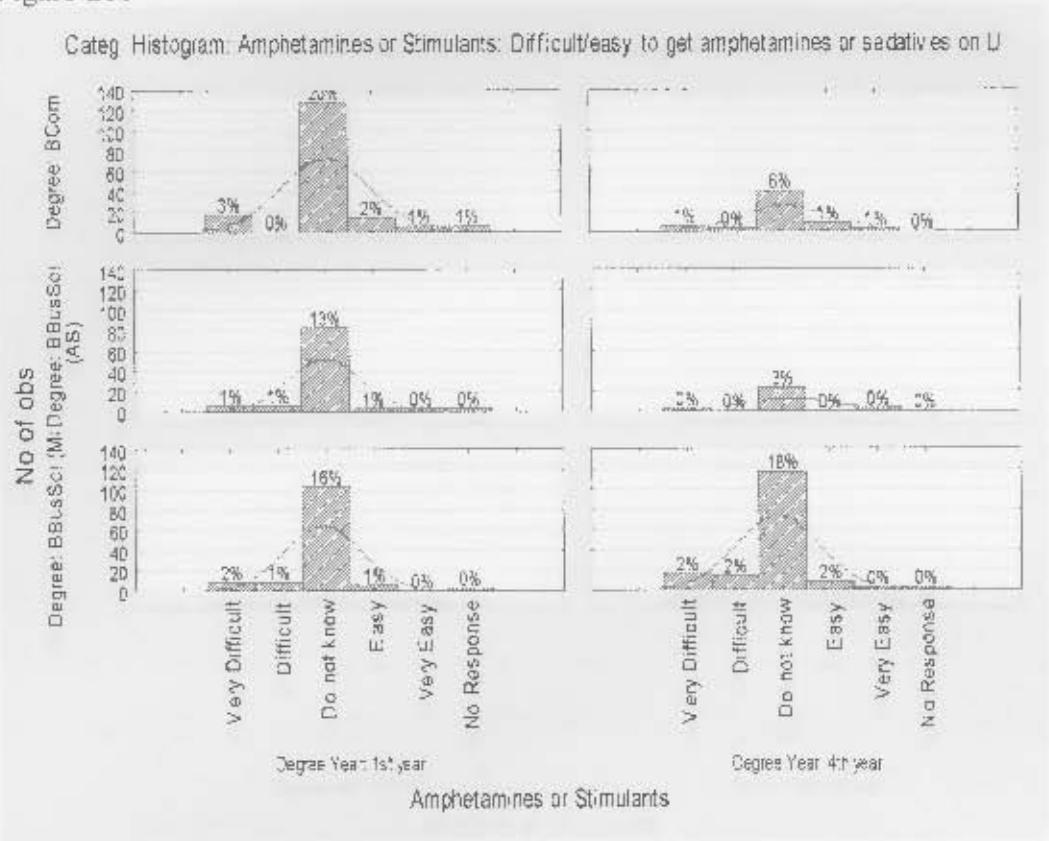

Figure B36

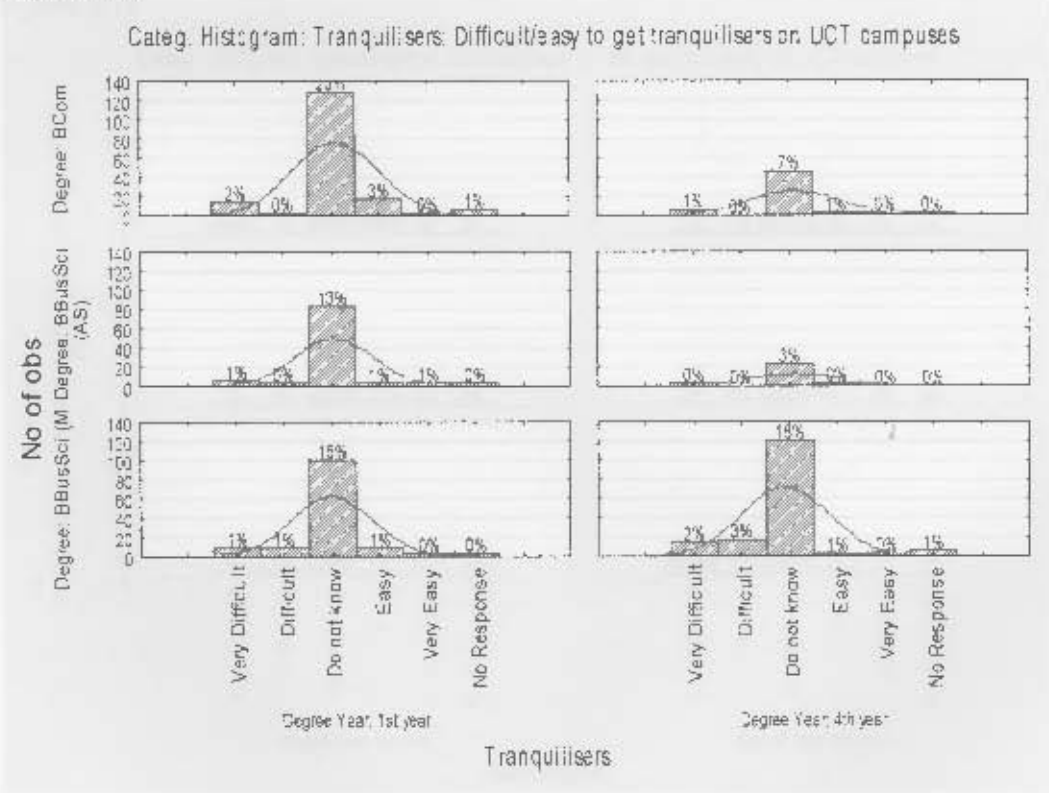

Figure B37

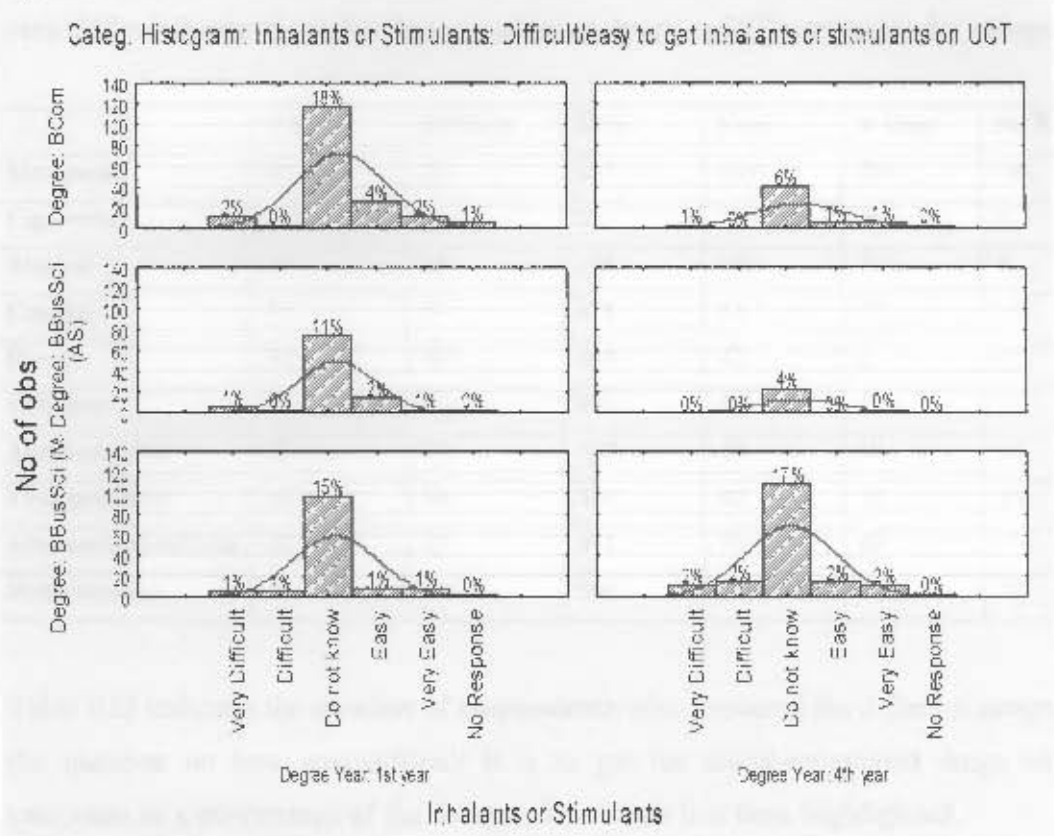

Figure B38

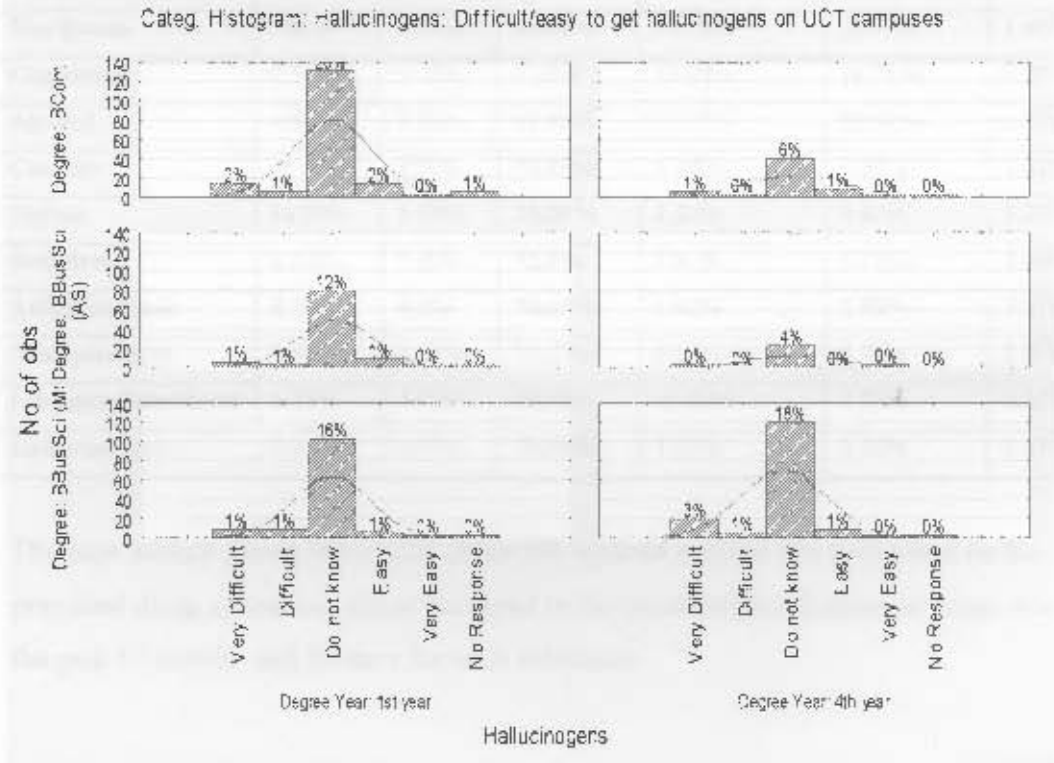

Table B55 lists the **number of respondents**, who answered the question on how easy/difficult it was to get the above-mentioned drugs on UCT campuses, **by category.**

	V Diff	Difficult	DNK	Easy	V Easy	No Resp
Marijuana	23	20	227	194	200	10
Cigarettes	2	1	22	126	517	6
Alcohol	33	55	128	185	267	6
Cocaine	71	51	478	43	12	19
Heroin	95	40	494	22	6	17
Sedatives	44	37	490	58	28	17
Amphetamines	59	31	503	46	19	16
Tranquialisers	50	34	510	42	18	20
Inhalants/Stimulants	42	27	471	71	46	17
Hallucinogens	57	27	506	49	17	18

Table B55 indicates the **number of respondents** who answered the different categories in the question on how easy/difficult it is to get the above-mentioned drugs on UCT campuses **as a percentage of the sample. The mode has been highlighted.**

	Very Diff	Diff	DNK	Easy	Very easy	No Resp
Marijuana	3.41%	2.97%	**33.68%**	28.78%	29.67%	1.48%
Cigarettes	0.3%	0.15%	3.26%	18.69%	**76.71%**	0.89%
Alcohol	4.9%	8.16%	18.99%	27.45%	**39.61%**	0.89%
Cocaine	10.53%	7.57%	**70.92%**	6.38%	1.78%	2.82%
Heroin	14.09%	5.93%	**73.29%**	3.26%	0.89%	2.52%
Sedatives	6.53%	5.49%	**72.7%**	8.61%	4.15%	2.52%
Amphetamines	8.75%	4.6%	**74.63%**	6.82%	2.82%	2.37%
Tranquialisers	7.42%	5.04%	**75.67%**	6.23%	2.67%	2.97%
Inhalants/Stimulants	6.23%	4.01%	**69.88%**	10.53%	6.82%	2.52%
Hallucinogens	8.46%	4.01%	**75.07%**	7.27%	2.52%	2.67%

The next section shows the results of the chi squared statistic test performed on the 5 most prevalent drugs of use and abuse surveyed in the questionnaire looking at usage ever, over the past 12 months and 30 days for each substance.

Tables B56 – B57: Tobacco

Table B56

Statistic	Statistics: Tobacco ever(2) x Tobacco 12 months(3)		
	Chi-square	df	p
Pearson Chi-square	0.000000	df=2	p=1.0000
M-L Chi-square	0.000000	df=2	p=1.0000
Phi	0.000000		
Contingency coefficient	0.000000		
Cramér's V	0.000000		

Table B57

Statistic	Statistics: Tobacco 12 months(3) x Tobacco 30 days(3)		
	Chi-square	df	p
Pearson Chi-square	59.58269	df=4	p=.00000
M-L Chi-square	12.95263	df=4	p=.01151
Phi	.4294957		
Contingency coefficient	.3946366		
Cramér's V	.3036993		

Tables B58 – B59: Alcohol

Table B58

Statistic	Statistics: Alcohol ever(2) x Alcohol 12 months(2)		
	Chi-square	df	p
Pearson Chi-square	0.000000	df=1	p=1.0000
M-L Chi-square	0.000000	df=1	p=1.0000

Table B59

Statistic	Statistics: Alcohol 12 months(2) x Alcohol 30 days(5)		
	Chi-square	df	p
Pearson Chi-square	0.000000	df=4	p=1.0000
M-L Chi-square	0.000000	df=4	p=1.0000
Phi	0.000000		
Contingency coefficient	0.000000		
Cramér's V	0.000000		

Tables B60 B61: Cannabis

Table B60

Statistic	Statistics: Cannabis ever(2) x Cannabis 12 months(3)		
	Chi-square	df	p
Pearson Chi-square	0.000000	df=2	p=1.0000
M-L Chi-square	0.000000	df=2	p=1.0000
Phi	0.000000		
Contingency coefficient	0.000000		
Cramér's V	0.000000		

Table B61

Statistic	Statistics: Cannabis 12 months(3) x Cannabis 30 days(5)		
	Chi-square	df	p
Pearson Chi-square	228.0000	df=8	p=0.0000
M-L Chi-square	12.85430	df=8	p=.11698
Phi	1.000000		
Contingency coefficient	.7071068		
Cramér's V	.7071068		

Tables B62 – B63: Stimulants

Table B62

Statistic	Statistics: Stimulants(3) x Stimulants 12 months(3)		
	Chi-square	df	p
Pearson Chi-square	109.0000	df=4	p=0.0000
M-L Chi-square	11.37349	df=4	p=.02268
Phi	1.000000		
Contingency coefficient	.7071068		
Cramér's V	.7071068		

Table B63

Statistic	Statistics: Stimulants 12 months(3) x Stimulants 30 days(5)		
	Chi-square	df	p
Pearson Chi-square	27.99107	df=8	p=.00048
M-L Chi-square	7.295866	df=8	p=.50508
Phi	.7007649		
Contingency coefficient	.5738826		
Cramér's V	.4955156		

Tables B64 – B65: MDMA/Ecstasy

Table B64

Statistic	Statistics: MDMA/Ecstacy(3) x MDMA/ecstacy 12 months(3)		
	Chi-square	df	p
Pearson Chi-square	87.00000	df=4	p=.00000
M-L Chi-square	10.92028	df=4	p=.02748
Phi	1.000000		
Contingency coefficient	.7071068		
Cramér's V	.7071068		

Table B65

Statistic	Statistics: MDMA/ecstacy 12 months(3) x MDMA/Ecstacy 30 days(5)		
	Chi-square	df	p
Pearson Chi-square	24.99000	df=8	p=.00156
M-L Chi-square	7.071325	df=8	p=.52896
Phi	.7000000		
Contingency coefficient	.5734624		
Cramér's V	.4949747		

The next section shows the results of the chi squared statistic test performed on the most prevalent drugs of use and abuse, namely: alcohol, cannabis, tobacco, MDMA/Ecstasy, and stimulants

Table B66: Tobacco and Alcohol

Statistic	Statistics: Tobacco ever(2) x Alcohol ever(2)		
	Chi-square	df	p
Pearson Chi-square	33.57943	df=1	p=.00000
M-L Chi-square	30.98015	df=1	p=.00000
Phi for 2 x 2 tables	.2232064		
Tetrachoric correlation	.4301699		
Contingency coefficient	.2178457		

Table B67: Tobacco and Cannabis

Statistic	Statistics: Tobacco ever(2) x Cannabis ever(2)		
	Chi-square	df	p
Pearson Chi-square	149.230(	df=1	p=0.000(
M-L Chi-square	160.126(	df=1	p=0.000(
Phi for 2 x 2 tables	.4705417		
Tetrachoric correlation	.7140298		
Contingency coefficient	.4257626		

Table B68: Tobacco and Inhalants

Statistic	Statistics: Tobacco ever(2) x Inhalants ever(3)		
	Chi-square	df	p
Pearson Chi-square	24.71681	df=2	p=.00000
M-L Chi-square	30.82327	df=2	p=.00000
Phi	.1914989		
Contingency coefficient	.1880813		
Cramér's V	.1914989		

Table B69: Tobacco compared with Stimulants/Amphetamines

Statistic	Statistics: Tobacco ever(2) x Stimulants ever(3)		
	Chi-square	df	p
Pearson Chi-square	20.96399	df=2	p=.00003
M-L Chi-square	24.14859	df=2	p=.00001
Phi	.1763628		
Contingency coefficient	.1736824		
Cramér's V	.1763628		

Table B70: Tobacco and MDMA/Ecstasy

Statistic	Statistics: Tobacco ever(2) x MDMA/Ecstacy ever(3)		
	Chi-square	df	p
Pearson Chi-square	34.78658	df=2	p=.00000
M-L Chi-square	45.02082	df=2	p=.00000
Phi	.2271830		
Contingency coefficient	.2215379		
Cramér's V	.2271830		

Tables B71 – B72: Alcohol and Cannabis

Table B71

Statistic	Statistics: Alcohol ever(2) x Cannabis ever(2)		
	Chi-square	df	p
Pearson Chi-square	47.26115	df=1	p=.00000
M-L Chi-square	52.17950	df=1	p=.00000
Phi for 2 x 2 tables	.264802€		
Tetrachoric correlation	.568098€		
Contingency coefficient	.255979€		

Table B72

Statistic	Statistics: Alcohol 30 days(5) x Cannabis 30 days(5)		
	Chi-square	df	p
Pearson Chi-square	32.84806	df=16	p=.00775
M-L Chi-square	27.20913	df=16	p=.03924
Phi	.3837978		
Contingency coefficient	.3583140		
Cramér's V	.1918989		

Table B73: Alcohol and Inhalants

Statistic	Statistics: Alcohol ever(2) x Inhalants ever(3)		
	Chi-square	df	p
Pearson Chi-square	7.143476	df=2	p=.02811
M-L Chi-square	9.760391	df=2	p=.00760
Phi	.1029496		
Contingency coefficient	.1024084		
Cramér's V	.1029496		

Table B74: Alcohol and Stimulants/Amphetamines

Statistic	Statistics: Alcohol ever(2) x Stimulants ever(3)		
	Chi-square	df	p
Pearson Chi-square	7.532982	df=2	p=.02314
M-L Chi-square	9.540387	df=2	p=.00848
Phi	.1057191		
Contingency coefficient	.1051332		
Cramér's V	.1057191		

Table B75: Alcohol and MDMA/Ecstasy

Statistic	Statistics: Alcohol ever(2) x MDMA/Ecstacy ever(3)		
	Chi-square	df	p
Pearson Chi-square	12.03507	df=2	p=.00244
M-L Chi-square	9.476342	df=2	p=.00876
Phi	.1336271		
Contingency coefficient	.1324498		
Cramér's V	.1336271		

Table B76: Cannabis and Inhalants

Statistic	Statistics: Cannabis ever(2) x Inhalants ever(3)		
	Chi-square	df	p
Pearson Chi-square	44.91477	df=2	p=.00000
M-L Chi-square	49.37591	df=2	p=.00000
Phi	.2581456		
Contingency coefficient	.2499516		
Cramér's V	.2581456		

Table B77: Cannabis and Stimulants/Amphetamines

Statistic	Statistics: Cannabis ever(2) x Stimulants ever(3)		
	Chi-square	df	p
Pearson Chi-square	37.47971	df=2	p=.00000
M-L Chi-square	39.57580	df=2	p=.00000
Phi	.2358132		
Contingency coefficient	.2295181		
Cramér's V	.2358132		

Table B78: Cannabis and MDMA/Ecstasy

Statistic	Statistics: Cannabis ever(2) x MDMA/Ecstacy ever(3)		
	Chi-square	df	p
Pearson Chi-square	76.72949	df=2	p=.00000
M-L Chi-square	91.04008	df=2	p=0.0000
Phi	.3374048		
Contingency coefficient	.3196976		
Cramér's V	.3374048		

Table B79: Stimulants/Amphetamines and MDMA/Ecstasy

Statistic	Statistics: Stimulants ever(3) x MDMA/Ecstacy ever(3)		
	Chi-square	df	p
Pearson Chi-square	122.9819	df=4	p=0.0000
M-L Chi-square	92.83900	df=4	p=0.0000
Phi	.4271601		
Contingency coefficient	.3928225		
Cramér's V	.3020478		

Table B80: Stimulants/Amphetamines and Inhalants

Statistic	Statistics: Stimulants ever(3) x Inhalants ever(3)		
	Chi-square	df	p
Pearson Chi-square	78.11502	df=4	p=.00000
M-L Chi-square	60.08300	df=4	p=.00000
Phi	.3404374		
Contingency coefficient	.3222739		
Cramér's V	.2407256		

Table B81: MDMA/Ecstasy and Inhalants

Statistic	Statistics: MDMA/Ecstacy ever(3) x Inhalants ever(3)		
	Chi-square	df	p
Pearson Chi-square	84.88279	df=4	p=.00000
M-L Chi-square	61.73520	df=4	p=.00000
Phi	.3548787		
Contingency coefficient	.3344433		
Cramér's V	.2509371		

The next section shows the results of the chi squared statistic test performed on the 5 most prevalent drugs of use and abuse surveyed in the questionnaire with degree, degree year and gender for each substance.

Table B82: Tobacco and degree year

Statistic	Statistics: Degree Year(3) x Tobacco ever(2)		
	Chi-square	df	p
Pearson Chi-square	15.34699	df=2	p=.00047
M-L Chi-square	15.75301	df=2	p=.00038
Phi	.1508974		
Contingency coefficient	.1492082		
Cramér's V	.1508974		

Table B83: Tobacco and degree

Statistic	Statistics: Degree(4) x Tobacco ever(2)		
	Chi-square	df	p
Pearson Chi-square	11.64437	df=3	p=.00871
M-L Chi-square	11.37517	df=3	p=.00986
Phi	.1314402		
Contingency coefficient	.1303192		
Cramér's V	.1314402		

Table B84: Tobacco and Gender

	Statistics: Gender(3) x Tobacco ever(2)		
Statistic	Chi-square	df	p
Pearson Chi-square	3.832174	df=2	p=.14719
M-L Chi-square	3.839644	df=2	p=.14664
Phi	.0754037		
Contingency coefficient	.0751903		
Cramér's V	.0754037		

Table B85: Alcohol and degree year

	Statistics: Degree Year(3) x Alcohol ever(2		
Statistic	Chi-square	df	p
Pearson Chi-square	13.7398€	df=2	p=.00104
M-L Chi-square	15.3687€	df=2	p=.00046
Phi	.1427775		
Contingency coefficient	.1413445		
Cramér's V	.1427775		

Table B86: Alcohol and degree

	Statistics: Degree(4) x Alcohol ever(2)		
Statistic	Chi-square	df	p
Pearson Chi-square	8.853885	df=3	p=.03130
M-L Chi-square	8.874165	df=3	p=.03102
Phi	.1146135		
Contingency coefficient	.1138684		
Cramér's V	.1146135		

Table B87: Alcohol and gender

	Statistics: Gender(3) x Alcohol ever(2		
Statistic	Chi-square	df	p
Pearson Chi-square	3.872235	df=2	p=.14427
M-L Chi-square	4.379846	df=2	p=.11193
Phi	.0757965		
Contingency coefficient	.0755800		
Cramér's V	.0757965		

Table B88: Cannabis and degree year

	Statistics: Degree Year(3) x Cannabis ever(2)		
Statistic	Chi-square	df	p
Pearson Chi-square	28.08023	df=2	p=.00000
M-L Chi-square	26.42337	df=2	p=.00000
Phi	.2041129		
Contingency coefficient	.1999894		
Cramér's V	.2041129		

Table B89: Cannabis and degree

	Statistics: Degree(4) x Cannabis ever(2)		
Statistic	Chi-square	df	p
Pearson Chi-square	20.89501	df=3	p=.00011
M-L Chi-square	21.12933	df=3	p=.00010
Phi	.1760724		
Contingency coefficient	.1734050		
Cramér's V	.1760724		

Table B90: Cannabis and gender

	Statistics: Gender(3) x Cannabis ever(2		
Statistic	Chi-square	df	p
Pearson Chi-square	17.2842(	df=2	p=.00018
M-L Chi-square	17.47571	df=2	p=.00016
Phi	.1601381		
Contingency coefficient	.1581234		
Cramér's V	.1601381		

Table B91: Amphetamines/Stimulants and degree year

	Statistics: Degree Year(3) x Stimulants(3)		
Statistic	Chi-square	df	p
Pearson Chi-square	14.63363	df=4	p=.00553
M-L Chi-square	14.30613	df=4	p=.00638
Phi	.1473486		
Contingency coefficient	.1457746		
Cramér's V	.1041912		

Table B92: Amphetamines/Stimulants and degree

	Statistics: Degree(4) x Stimulants ever(3)		
Statistic	Chi-square	df	p
Pearson Chi-square	8.125302	df=6	p=.22908
M-L Chi-square	8.254272	df=6	p=.22007
Phi	.1097968		
Contingency coefficient	.1091409		
Cramér's V	.0776381		

Table B93: Amphetamines/Stimulants and gender

	Statistics: Gender(3) x Stimulants ever(3)		
Statistic	Chi-square	df	p
Pearson Chi-square	8.634343	df=4	p=.07093
M-L Chi-square	6.781446	df=4	p=.14791
Phi	.1131839		
Contingency coefficient	.1124658		
Cramér's V	.0800331		

Table B94: MDMA/Ecstasy and degree year

	Statistics: Degree Year(3) x MDMA/Ecstacy ever(3)		
Statistic	Chi-square	df	p
Pearson Chi-square	15.45102	df=4	p=.00385
M-L Chi-square	15.41190	df=4	p=.00392
Phi	.1514079		
Contingency coefficient	.1497017		
Cramér's V	.1070616		

Table B95: MDMA/Ecstasy and degree

	Statistics: Degree(4) x MDMA/Ecstacy ever(3)		
Statistic	Chi-square	df	p
Pearson Chi-square	6.026039	df=6	p=.42029
M-L Chi-square	6.667167	df=6	p=.35274
Phi	.0945553		
Contingency coefficient	.0941354		
Cramér's V	.0668607		

Table B96: MDMA/Ecstasy and gender

	Statistics: Gender(3) x MDMA/Ecstacy ever(3		
Statistic	Chi-square	df	p
Pearson Chi-square	2.256768	df=4	p=.68865
M-L Chi-square	2.595585	df=4	p=.62761
Phi	.0578647		
Contingency coefficient	.0577680		
Cramér's V	.0409165		

Table B97: Cross tabulation of past month alcohol usage and past month cannabis usage.

	Crosstabulation of past month alcohol and cannabis usage.						
	Alcohol 30 days	Cannabis 30 days No	Cannabis 30 days Yes 1-5	Cannabis 30 days Yes 6-19	Cannabis 30 days Yes 20+	Cannabis 30 days No response	Row Totals
Count	No	8	0	0	0	0	8
Total Percent		3.59%	0.00%	0.00%	0.00%	0.00%	3.59%
Count	Yes 1-5	73	34	9	6	0	122
Total Percent		32.74%	15.25%	4.04%	2.69%	0.00%	54.71%
Count	Yes 6-19	44	21	5	5	0	75
Total Percent		19.73%	9.42%	2.24%	2.24%	0.00%	33.63%
Count	Yes 20+	11	1	0	5	1	18
Total Percent		4.93%	0.45%	0.00%	2.24%	0.45%	8.07%
Count	102	0	0	0	0	0	0
Total Percent		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Count	All Grps	136	56	14	16	1	223

APPENDIX C
QUESTIONNAIRE COVER LETTER

UNIVERSITY OF CAPE TOWN

School of Management Studies
(Previously Department of Business Science)

University of Cape Town · Private Bag · Rondebosch · 7701
Telephone: +27 (21) 650-2311
Fax: +27 (21) 689-7570

Dear Students

My Name is Nina Berezowski. I am a Masters Student within the UCT School of Management Studies, Commerce Faculty majoring in Organisational Psychology. For my masters thesis research I have chosen to study substance abuse amongst students in the UCT commerce faculty. I have decided to contain my sample to first year and fourth year students across commerce degrees.

I am hoping my research will produce interesting results that will feed directly into UCT's substance abuse policy which is still being formulated.

The head of the department of Organisational Psychology, Dr Joha Louw-Potgieter, supports my research fully. The commerce ethics committee, the commerce student's council and Dr. Ian Mackintosh, the acting Dean of Students, have all approved and endorse my research.

I thank you so much for taking the time to complete the questionnaire. I know you know what it is like trying to get people to support and take part in one's research. If there is anything I can do to help you with your research please let me know. I hope you enjoy filling in the questionnaire.

Once the questionnaire is completed, please put it into the envelope provided and place it in my student inbox located on the 4th floor of the commerce building School of Management Studies Section, in front of rm. 3.42, (other end of the corridor from Professor Smith's office). My name is written clearly on the inbox, which is locked at all times.

Thanking you once again

Nina Berezowski

Joha-Louw Potgieter

APPENDIX D
QUESTIONNAIRE

2. CONSUMPTION PATTERNS

2.1 (a) Have you ever smoked, chewed, or sniffed any tobacco product (such as cigarettes, cigars, pipe tobacco, chewing tobacco)?

- A No
- B Yes

(b) Have you smoked, chewed, or sniffed a tobacco product in the past 12 months?

- A No
- B Yes

(c) Have you smoked, chewed, or sniffed a tobacco product in the past 30 days?

- A No
- B Yes

(d) How old were you when you first smoked, chewed, or sniffed a tobacco product? _____

2.2 (a) Have you ever drunk any alcoholic beverage (including beer, wine and spirits)?

- A No
- B Yes

(b) Have you drunk any alcoholic beverage in the past 12 months?

- A No
- B Yes

(c) Have you drunk any alcoholic beverage during the past 30 days?

- A No
- B Yes, on 1-5 days
- C Yes, on 6-19 days
- D Yes, on 20 or more days

(d) How old were you when you first had a drink of beer, wine, or spirits- more than just a sip? _____

2.3 (a) Have you ever taken any cannabis (marijuana, pot, hashish, grass, bhang, ganja)?

- A No
- B Yes

(b) Have you taken any cannabis in the past 12 months?

- A No
- B yes

(c) Have you taken any cannabis during the past 30 days?

- A No
- B Yes, on 1-5 days
- C Yes, on 6-19 days
- D Yes, on 20 or more days

(d) How old were you when you first took cannabis? _____

II)?

B Yes

(b) Have you taken any heroin in the past 12 months?

A No
B Yes

(c) Have you taken any heroin in the past 30 days?

A No
B Yes, on 1-5 days
C Yes, on 6-19 days
D Yes, on 20 or more days

(d) How old were you when you first took heroin?

_____

2.5 (a) Have you sniffed or inhaled things (such as glue, aerosol sprays, or other gases) to get high? (Do not include smoke)

A No
B Yes

(b) Have you sniffed or inhaled things to get high in the past 12 months?

A No
B Yes

(c) Have you sniffed or inhaled things to get high during the past 30 days?

A No
B Yes, on 1-5 days
C Yes, on 6-19 days
D Yes, on 20 or more days

(d) How old were you when you first sniffed or inhaled something to get high?

_____

(e) If you have ever sniffed or inhaled things, write in the name of the thing you have sniffed or inhaled most recently.

_____

2.6 (a) Have you ever taken any cocaine?

A No
B Yes

(b) Have you taken any cocaine in the past 12 months?

A No
B Yes

(c) Have you taken any cocaine during the past 30 days?

A No
B Yes, on 1-5 days
C Yes, on 6-19 days
D Yes, on 20 or more days

(d) How old were you when you first took cocaine?

_____

(b) Have you taken any hallucinogens in the past 12 months?

- A No
- B yes

(c) Have you taken any hallucinogens during the past 30 days?

- A No
- B Yes, on 1-5 days
- C Yes, on 6-19 days
- D Yes, on 20 or more days

(d) How old were you when you first took a hallucinogen?

_____

2.8 (a) Have you ever taken any amphetamines or other stimulants (uppers, speed, diet pills) without a prescription or a doctor telling you to do so?

- A No
- B Yes

(b) Have you taken any amphetamines or other stimulants in the past 12 months without a prescription or a doctor telling you to do so?

- A No
- B Yes

(c) Have you taken any amphetamines or other stimulants during the past 30 days without a prescription or a doctor telling you to do so?

- A No
- B Yes, on 1-5 days
- C Yes, on 6-19 days
- D Yes, on 20 or more days

(d) How old were you when you first took an amphetamine or other stimulant without a prescription or a doctor telling you to do so?

_____

(e) If you have taken amphetamines or other stimulants, write in the name of the one you have taken most recently.

_____

2.9 (a) Have you ever taken MDMA or ecstasy?

- A No
- B Yes

(b) Have you taken any MDMA or ecstasy in the past 12 months?

- A No
- B Yes

(C) Have you taken any MDMA or ecstasy during the past 30 days?

- A No
- B Yes, on 1-5 days
- C Yes, on 6-19 days
- D Yes, on 20 or more days

(d) How old were you when you first took MDMA or ecstasy?

_____

(b) Have you taken any tranquilisers in the past 12 months without a prescription or a doctor telling you to do so?

☐ A No
☐ B yes

(c) Have you taken any tranquilisers during the past 30 days without a prescription or a doctor telling you to do so?

☐ A No
☐ B Yes, on 1-5 days
☐ C Yes, on 6-19 days
☐ D Yes, on 20 or more days

(d) How old were you when you first took a tranquiliser without a prescription or a doctor telling you to do so?

_____

(e) If you have ever taken tranquilisers write in the name of the one you have taken most recently.

_____

2.11 (a) Have you ever taken any sedatives (barbiturates, downers) without a prescription or a doctor telling you to do so?

☐ A No
☐ B yes

(b) Have you taken any sedatives in the past 12 months without a prescription or a doctor telling you to do so?'

☐ A No
☐ B yes

(c) Have you taken any sedatives during the past 30 days without a prescription or a doctor telling you to do so?

☐ A No
☐ B Yes, on 1-5 days
☐ C Yes, on 6-19 days
☐ D Yes, on 20 or more days

(d) How old were you when you first took a sedative without a prescription or a doctor telling you to do so?

_____

(e) If you have taken sedatives write in that name of the one you have taken most recently.

_____

2.1.2 (a) Would you admit to abusing drugs and/or alcohol? Abuse being defined as having 5 or more drinks in a row on five more occasions in the past 30 days.

☐ A No
☐ B yes

<u>If yes to the above:</u>

(b) Do you abuse drugs?

☐ A No
☐ B Yes

(c) Do you abuse alcohol?

☐ A No
☐ B Yes

Please use the scale below when answering this question.

1. Very Difficult
2. Difficult
3. Do not know
4. Easy
5. Very Easy

	Very Difficult	Difficult	Do not know	Easy	Very Easy
(a) Marijuana	1	2	3	4	5
(b) Cigarettes	1	2	3	4	5
(c) Alcohol	1	2	3	4	5
(d) Cocaine	1	2	3	4	5
(e) Heroin	1	2	3	4	5
(f) Sedative	1	2	3	4	5
(g) Amphetamines	1	2	3	4	5
(h) Tranquilisers	1	2	3	4	5
(i) Inhalants/stimulants	1	2	3	4	5
(j) Hallucinogens	1	2	3	4	5

answer the questions appropriately.

3. UCT RULES AND POLICIES

3.1 **Answer the following questions using the table below. Please select only one answer per question:**

1 - Yes
2 - No
3 - Do Not Know

	Yes	No	Do Not Know
3.1.1 UCT does not allow alcohol on its premises	1	2	3
3.1.2. UCT provides alcohol-free food facilities	1	2	3
3.1.3 I am not allowed to carry alcohol and drugs while on UCT campus	1	2	3
3.1.4 UCT has a formal policy on alcohol and drug use.	1	2	3
3.1.5 I feel that a formal policy on alcohol/drug usage at UCT is necessary	1	2	3
3.1.6 UCT is doing enough to address the issue of substance abuse amongst students	1	2	3
3.1.7 I feel that some form of spot checks/testing at UCT is necessary	1	2	3
3.1.8 I would have objections to spot checks/testing at UCT	1	2	3
3.1.9 If UCT does spot checks/testing, or had to do them, I am worried that one day I may be exposed.	1	2	3

Kindly complete the following questions, marking a tick (✓) in one block only

3.2 Has UCT alerted its members as to the problems associated with substance abuse?

- ☐ Yes
- ☐ No
- ☐ Not Sure

3.2.1 If yes to the above, how did UCT put across this information?

- ☐ Posters or leaflets
- ☐ Seminars or courses
- ☐ Letters
- ☐ Other (please specify)

☐ Yes
☐ No

3.2.3 Have you ever received information about how to recognise someone with a drinking problem?
☐ Yes
☐ No

3.2.4 To what extent did you find the information referred to above as helpful in understanding substance abuse related problems?
☐ Very Helpful
☐ Helpful
☐ Neither Helpful nor Unhelpful
☐ Not Helpful
☐ Not Very Helpful

3.3 Do you think that UCT should have policies related to the use and abuse of illegal substances on campus?
☐ Yes
☐ No
☐ Not sure

3.3.1 Do you think that UCT should have policies related to the use and abuse of legal substances on campus (i.e. alcohol)?
☐ Yes
☐ No
☐ Not sure

3.4 Are you aware of a substance abuse policy at UCT?
☐ Yes
☐ No

3.5 Are you aware of any of the following services offered at UCT? (Tick whichever you are aware of)
☐ Substance abuse counselling
☐ Drug rehabilitation referrals
☐ Prevention programmes

3.6 Would you support a policy that prevented alcoholic beverages from being served at UCT events?
☐ Yes
☐ No
☐ Not Sure

3.6.1 If not, why not (please specify?)

_____

_____

3.7 Do you think UCT is responsible for dealing with drug and alcohol use among its students?
☐ Yes
☐ No
☐ Not sure